DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 21-134731-LO

Project Name/Address: Early World Childrens School Bridge Repair/13831 NE Bellevue Redmond Rd

Planner: Drew Folsom
425-452-4441
dfolsom@bellevuewa.gov

Minimum Comment Period: February 24, 2022

Materials included in this Notice:

- ☑ Blue Bulletin
- ☑ Checklist
- ☑ Vicinity Map
- ☑ Plans
- ☑ Other: Stream Memo, Critical Areas Report

OTHERS TO RECEIVE THIS DOCUMENT:

- ☑ State Department of Fish and Wildlife
- ☑ State Department of Ecology, Shoreline Planner N.W. Region
- ☑ Army Corps of Engineers
- ☑ Attorney General
- ☑ Muckleshoot Indian Tribe

City of Bellevue Submittal Requirements	**27**

ENVIRONMENTAL CHECKLIST

4/18/02

Thank you in advance for your cooperation and adherence to these procedures. If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.

INTRODUCTION
Purpose of the Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21c RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City of Bellevue identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the Planner in the Permit Center can assist you.
The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Include references to any reports or studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

Use of a Checklist for Nonproject Proposals: *A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.*

For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.

For nonproject actions, the references in the checklist to the words *project*, *applicant*, and *property* or *site* should be read as *proposal*, *proposer*, and *affected geographic area*, respectively.

Attach an 8½" x 11" vicinity map which accurately locates the proposed site.

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City of Bellevue Submittal Requirements	**27a**

ENVIRONMENTAL CHECKLIST

12/21/00

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.

BACKGROUND INFORMATION

Property Owner: **Simca Limited Partnership**

Proponent: **Early World Children's School**

Contact Person: **Kenny Booth, The Watershed Company**

(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: **750 Sixth Street South, Kirkland, WA 98033**

Phone: **(425) 822-5242**

Proposal Title: **Early World Children's School Bridge Repair**

Proposal Location (Street address and nearest cross street or intersection) Provide a legal description if available:

Address: 13831 NE Bellevue-Redmond Road, Bellevue, WA 98005, King County

Parcel #: 2725059184, 2725059185

S/T/R: SW/27/25/05

Legal Description:

2725059184: LOT 4 BELLEVUE SP #83-15 REC #8508269005 SD SP DAF BEG SW COR OF W 267.03 FT AS MEAS ALG S LN OF THAT POR OF E 924.03 FT OF N 1/2 OF NE 1/4 OF SW 1/4 SEC 27-25-5 LY SLY OF REDMOND-BELLEVUE RD TH N ALG W LN OF SD SUBD 151.50 FT TO THREAD OF STREAM & TPOB TH ALG SD THREAD N 87-12-03 E 41.57 FT TH N 54-37-51 E 102.19 FT TH N 14-50-36 E 44.50 FT TH N 32-28-15 E 136.87 FT TH N 46-25-31 E 40.45 FT TH N 72-31-46 E 32.28 FT TO E LN OF W 267.03 FT OF E 924.03 FT OF SD SUBD TH N ALG ABOVE DESC E LN 10.72 FT TO SLY MGN SD BELLE-RED RD TH ALG SD SLY MGN 280 FT TO W LN OF W 267.03 FT OF E 924.03 FT OF SD SUBD TH S 176.81 FT TO TPOB ALSO BEG SW COR OF SD W 267.03 FT OF SD SUBD LY SLY OF SD BELLE-RED RD TH N ALG W LN OF SD SUBD 151.50 FT TO THREAD OF STREAM TH ALG SD THREAD N 87-12-03 E 41.57 FT TH N 54-37-51 E 102.19 FT TH N 14-50-36 E 44.50 FT TH N 32-28-15 E 136.87 FT TH N 46-25-31 E 40.45 FT TH N 72-31-46E 32.28 FT TO E LN OF W 267.03 FT OF E 924.03 FT OF SD SUBD TH S ALG SD E LN 416.72 FT TO S LN N 1/2 OF ABOVE DESC SUBD TH WLY ALG SD S LN 267.03 FT TO POB

2725059185:
POR OF W 100.00 FT OF E 657.00 FT MEAS ALG S LN OF N 1/4 OF NE 1/4 OF SW 1/4 LY SLY OF ST HWY # 2 D & W 100.00 FT OF E 657.00 FT OF N 100.00 FT OF S 1/2 OF N 1/2 OF SD NE ¼

Please attach an 8½" X 11" vicinity map that accurately locates the proposal site.

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Give an accurate, brief description of the proposal's scope and nature:

1. General description:

The project site is located at 13831 NE Bellevue-Redmond Road in Bellevue, WA (tax parcels 2725059184 and 2725059185)(project site). Residential uses are located to the east and south of the project site. Areas of open space and commercial offices are located west of the site. Commercial and retail uses are located north of the site across NE Bellevue-Redmond Road.

The project site is currently occupied by a day care center called Early World Children's School. Two bridges, over Kelsey Creek, provide vehicular access to the site from NE Bellevue-Redmond Road, with the school building centered between the driveways. Several adjacent properties also utilize the bridges, pursuant to access easements. The western driveway (lower bridge) is a one-way entrance into the site, while the middle driveway is a one-way exit. The lower bridge is comprised of wood and is susceptible to wood rot.

Parking for the school is located north of the middle bridge, along both sides of the school building, and in the rear of the structure. The bridges provide access over Kelsey Creek, which flows in a west-northwesterly direction as it passes through the project site.

The site is relatively flat, with the exception of the banks of Kelsey Creek, which in some areas are vertical with sheet pile walls. This particular segment of Kelsey Creek is highly urbanized and constrained in several sections by the sheet pile walls. Portions of the stream (particularly upstream of the site) were enhanced in 2010, which included installation of large woody debris, coir lifts, boulders, and native vegetation in an effort to stabilize portions of stream bank, slow flows within the creek, and provide additional in-stream habitat. Vegetation elsewhere along the creek is either sparse or overgrown with non-native species including Himalayan blackberry and Japanese knotweed.

Kelsey Creek is classified as a Type F (fish-bearing) stream and eventually flows into Mercer Slough and Lake Washington. Type F streams on sites with existing primary structures require standard buffer widths of 50 feet. No additional critical areas are found on-site or in the immediate vicinity.

The exiting lower bridge located at Early World Children's School in the City of Bellevue has deteriorated to a point that it is no longer useable. Therefore, repair of the bridge is proposed. The proposed repaired bridge will cross Kelsey Creek in the same location and will be of the same size as the existing bridge. All portions of the bridge will continue to be positioned above both sheet pile walls at the same approximate elevation as the existing structure. Therefore, the bridge would be located completely above the stream's ordinary high water mark. However, in order to provide adequate loading capabilities, approximately 13 three-inch-diameter pipe piles will be added within the stream channel, adjacent to the existing sheet pile walls. Engineering analysis determined that the existing abutments alone cannot support the repaired bridge. Therefore, it was determined that pipe piles are necessary in order to properly support the bridge and there is no location outside of the stream channel to place the pipe piles. The piles will be located inside of the perimeter of the existing sheet piles walls, such that they will not extend any further waterward than the exterior edges of the sheet pile walls.

Impacts have been minimized to the greatest extent feasible by limiting the size of the bridge to the same as the existing. Further, standard BMPs will be followed to minimize disturbance during construction.

2. Acreage of site: **The parcels involved total approximately 1.24 acres (54,177 sq. ft.).**

3. Number of dwelling units/buildings to be demolished: **None**

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4. Number of dwelling units/buildings to be constructed: **None**

5. Square footage of buildings to be demolished: **N/A**

6. Square footage of buildings to be constructed: **N/A**

7. Quantity of earth movement (in cubic yards): **Cut = ~1 CY / Fill = ~ 1 CY**

8. Proposed land use: **The site is currently occupied by a day care center called Early World Children's School. No changes are proposed to the existing land use.**

9. Design features, including building height, number of stories, and proposed exterior materials: **N/A**

10. Other

Estimated date of completion of the proposal or timing of phasing:

Once started, bridge repair is estimated to take approximately 2 months. Construction is likely to occur in the summer of 2022.

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The Watershed Company. August 9, 2021. Early World Children's School Bridge Repair Kelsey Creek Memo.

The Watershed Company. December 17, 2021. Early World Children's School – Critical Areas Narrative.

The Watershed Company. December 2021. Early World Children's School Bridge Repair Mitigation Plan.

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

No other proposals are pending at this time.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

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Jurisdiction/Agency	Application	Date Applied	File Number
Wash. Dept. of Fish & Wildlife	**Hydraulic Project Approval**	**Not yet applied**	
City of Bellevue	**Critical Areas Land Use Permit**	**Submitted concurrently with this checklist**	
City of Bellevue	**Building Permit**	**Not yet applied**	

Please provide one or more of the following exhibits, if applicable to your proposal.
(Please check appropriate box(es) for exhibits submitted with your proposal):

- ☐ Land Use Reclassification (rezone)
  Map of existing and proposed zoning

- ☐ Preliminary Plat or Planned Unit Development
  Preliminary plat map

- ☐ Clearing & Grading Permit
  Plan of existing and proposed grading
  Development plans

- ☑ Building Permit (or Design Review)
  Site plan
  Clearing & grading plan

- ☐ Shoreline Management Permit
  Site plan

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A. ENVIRONMENTAL ELEMENTS

1. EARTH

a. General description of the site (circle one): Flat Rolling Hilly Steep slopes Mountains Other:

The majority of the site is flat, while several areas of stream bank are vertical.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slopes on-site are the vertical portions of stream bank.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

According to the Associated Earth Sciences, Inc., geotechnical report, the site is underlain by Vashon advance outwash soils overlain by a thin discontinuous veneer of Vashon recessional outwash.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

This particular segment of Kelsey Creek is highly urbanized and constrained by sheet pile walls. There are no known unstable soils on-site.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Cut: ~ 1 CY

Fill: ~ 1 CY

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Erosion could occur if exposed soils are mobilized by rainfall. The measures described below would help minimize erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

No additional increase in impervious surface is proposed.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

All clearing would be in accordance with City of Bellevue Clearing & Grading Code (Chapter 23.76), permit conditions, and all other applicable codes, ordinances, and standards.

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2. AIR

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Any air quality impacts from construction vehicle / heavy equipment emissions and handheld power tools would be temporary and rapidly dissipated. After project completion, no further impacts to air would occur.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

The only off-site source of emissions that may affect the project is NE Bellevue-Redmond Road.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Standard methods of reducing impacts to air would be utilized, and include keeping all vehicles and machinery in good operating condition.

3. WATER

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Kelsey Creek passes through the project site. Kelsey Creek is classified as a Type F (fish-bearing) stream and eventually flows into Mercer Slough and Lake Washington.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The entire project takes place in and within 200 feet of Kelsey Creek. As previously described, proposed work includes the repair of an existing vehicular bridge. Detailed plans are attached.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No fill or excavation below the OHWM of Kelsey Creek is proposed.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. Portions of the proposed project are located within the 100-year floodplain of Kelsey Creek, and therefore are within the area of special flood hazard. However, there is anticipated to be no rise in the base flood elevation over pre-existing conditions.

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6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No intentional discharges of waste materials would occur during project construction.

b. Ground

1. Will ground water be withdrawn, or will water be discharged to ground water? Give a general description, purpose, and approximate quantities if known.

There will be no withdrawal of or discharge to ground water associated with this project.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

There will be no waste material from septic tanks or other sources discharged into the ground as part of this project.

c. Water runoff (including stormwater):

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Runoff from the immediate project site is not expected except at natural, near pre-project rates. In general, precipitation is expected to infiltrate into vegetated soils or flow directly into Kelsey Creek.

2) Could waste materials enter ground or surface waters? If so, generally describe.

During construction, fuel, lubricant or other material spills from equipment could enter surface waters.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

The erosion control measures described under question 1h would help control impacts to surface and runoff water. In addition, equipment would be in good working order with no known leaks.

4. PLANTS

a. Check or circle types of vegetation found on the site:

- ☒ deciduous tree: **alder**, **maple**, aspen, other: **paper birch**
- ☒ evergreen tree: fir, **cedar**, pine, other:
- ☒ shrubs: **Himalayan blackberry, Japanese knotweed, tall Oregon grape, osoberry, rhododendron**
- ☐ pasture
- ☐ crop or grain
- ☐ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other:
- ☐ water plants: water lily, eelgrass, milfoil, other:

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☒ other types of vegetation: English ivy, sword fern

b. What kind and amount of vegetation will be removed or altered?

Approximately 1,200 square feet of Himalayan blackberry and English ivy will be removed from the site and replaced with native plantings.

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

A detailed mitigation plan using only native species has been prepared for portions of the stream buffer. A total of 1,200 square feet of native plantings are proposed. Proposed species include western red cedar, western hemlock, vine maple, beaked hazelnut, Oregon grape, Pacific ninebark, clustered rose, common snowberry, evergreen huckleberry, red-twig dogwood, Hooker's willow, and western sword fern.

5. ANIMALS

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: **hawk**, **heron**, **eagle**, **songbirds**, other:
mammals: deer, bear, elk, **beaver**, other:
fish: bass, **salmon**, **trout**, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

Adult and juvenile chinook salmon, steelhead trout and possibly bull trout (listed as Threatened under the Federal Endangered Species Act) migrate through Kelsey Creek. Adults migrate upstream to reach spawning grounds; juveniles migrate downstream from their natal streams to reach the ocean. Kelsey Creek also contains coho salmon (Species of Concern under the Federal Endangered Species Act).

c. Is the site part of a migration route? If so, explain.

As described above, adult and juvenile salmon and trout migrate up and downstream, respectively, through Kelsey Creek.

d. Proposed measures to preserve or enhance wildlife, if any:

A detailed mitigation plan using only native species has been prepared for the project area. 1,200 square feet of native plants are proposed. Proposed species include western red cedar, western hemlock, vine maple, beaked hazelnut, Oregon grape, Pacific ninebark, clustered rose, common snowberry, evergreen huckleberry, red-twig dogwood, Hooker's willow, and western sword fern. Native plantings will provide overhanging vegetation to supplement the stream with detritus and insects, benefiting aquatic species; filtered shade; future recruitment of woody debris; and upland wildlife habitat.

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6. ENERGY AND NATURAL RESOURCES

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Fuel will be necessary for handheld power tools and heavy equipment during project construction. Otherwise no forms of energy (beyond those already utilized by the site) are necessary for the completed project.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

No new forms of energy are necessary for the completed project.

7. ENVIRONMENTAL HEALTH

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Typical hazards related to power tools and equipment fuels are associated with construction of the proposed project.

1) Describe special emergency services that might be required.

Emergency services are not anticipated at the site. In the unlikely event that an accident (spill, fire, other exposure) occurs involving toxic chemicals or hazardous wastes, the local Fire Department's Hazardous Materials Team would respond. If necessary, local medical services might also be required. The full range of safety and accident response supplies would be on-site to treat any emergency during construction.

2) Proposed measures to reduce or control environmental health hazards, if any:

Standard precautions would be taken to ensure the safety of the work crew. The construction manager would be contacted by a crew member immediately upon discovery of a spill. The construction manager would then ensure that the spill is cleaned up in the manner dictated by the chemical use instructions and would contact the appropriate authorities.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

NE Bellevue-Redmond Road is located adjacent to the project site and generates typical levels of noise associated with a busy roadway. However, the road noise will not affect the proposed project.

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2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise associated with the proposed project would be restricted to the use of construction equipment and power tools during the construction phase. Construction noise would be limited to normal daytime working hours. There would be no long-term noise associated with the proposed project.

3) Proposed measures to reduce or control noise impacts, if any:

As mentioned above, noise would be limited to daylight weekday hours. All construction equipment and power tools would be in good repair. No other noise-control measures are necessary.

8. LAND AND SHORELINE USE

a. What is the current use of the site and adjacent properties?

The site is currently occupied by a day care center called Early World Children's School. Residential uses are located to the east and south of the project site. Areas of open space and commercial offices are located west of the site. Commercial and retail uses are located north of the site across NE Bellevue-Redmond Road.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

Two separate buildings make up the childcare center. Both structures are located to the south of Kelsey Creek and are accessed from a total of two existing bridges over the creek.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

O (Office).

f. What is the current comprehensive plan designation of the site?

O (Office)

g. If applicable, what is the current shoreline master program designation of the site?

The project site is not located within shoreline jurisdiction.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Kelsey Creek has been classified as a Type F stream channel and is therefore considered by the City of Bellevue to be a critical area.

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i. Approximately how many people would reside or work in the completed project?

There will be no change in the number of people working at the project site as a result of the proposed improvements.

j. Approximately how many people would the completed project displace?

No person will be displaced as a result of this project.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

This project does not affect existing land use.

9. HOUSING

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. AESTHETICS

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The railings of the repaired bridge will be the same approximate height as the existing bridge – approximately 4 feet.

b. What views in the immediate vicinity would be altered or obstructed?

Views are not expected to change as a result of the bridge repair project.

c. Proposed measures to reduce or control aesthetic impacts, if any:

No measures are necessary.

11. LIGHT AND GLARE

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

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No additional light or glare will be produced by the proposed project as compared to the existing project site.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

The only potential off-site source of glare is the stream itself. Kelsey Creek may reflect the sun during certain times of the day.

d. Proposed measures to reduce or control light and glare impacts, if any:

The potential reflections of glare off Kelsey Creek are natural and therefore no reduction measures will be necessary.

12. RECREATION

a. What designated and informal recreational opportunities are in the immediate vicinity?

The project site offers passive wildlife viewing opportunities of Kelsey Creek. Additionally, Bellevue Highland Park is located approximately 0.25 mile east of the project site. The park offers baseball/softball fields, tennis courts, picnic tables, play areas and a skate park.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No measures are necessary.

13. HISTORIC AND CULTURAL PRESERVATION

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No places or objects of this type are known to exist in the immediate vicinity.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

There are no landmarks or evidence of such in the immediate vicinity.

c. Proposed measures to reduce or control impacts, if any:

Should historic, archeological, scientific or culturally significant items be encountered during implementation of this project, work would be temporarily stopped while the appropriate agencies are notified.

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14. TRANSPORTATION

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The project site can be accessed from NE Bellevue-Redmond Road. Access needs will be improved following bridge repair.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The nearest King County Metro transit stop is located at the corner of NE Bellevue-Redmond Road and 140th Avenue NE, approximately 0.12 mile east of the project site.

c. How many parking spaces would the completed project have? How many would the project eliminate?

The completed site would have the same number of parking spaces as the existing site. Therefore, no spaces would be eliminated.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

This project will not affect public roads in any way.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Water, rail, or air transportation would not be utilized by the completed project.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

The proposed project would not create any additional vehicle trips above those already generated by the existing use. No increase in traffic generation is expected.

g. Proposed measures to reduce or control transportation impacts, if any:

No measures are necessary.

15. PUBLIC SERVICES

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No increase in public service needs will result from this project.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No measures are necessary.

16. UTILITIES

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a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No new utilities are proposed as part of the project.

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

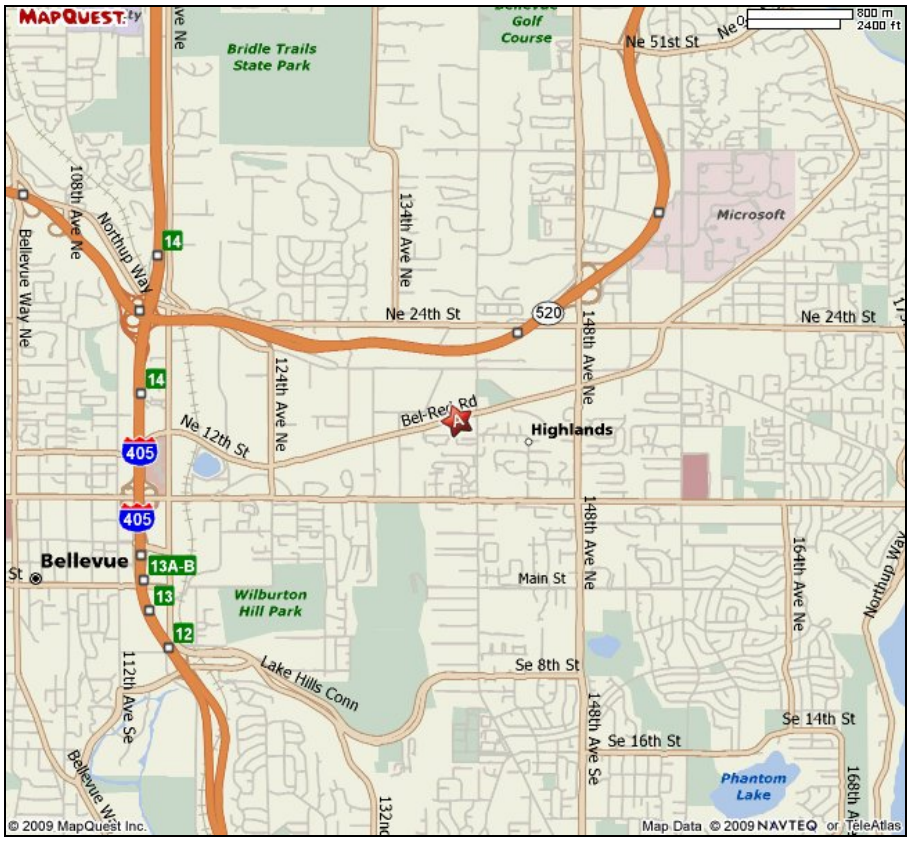
Signature 

Kenny Booth, AICP
Senior Planner

Date Submitted: 12-23-21

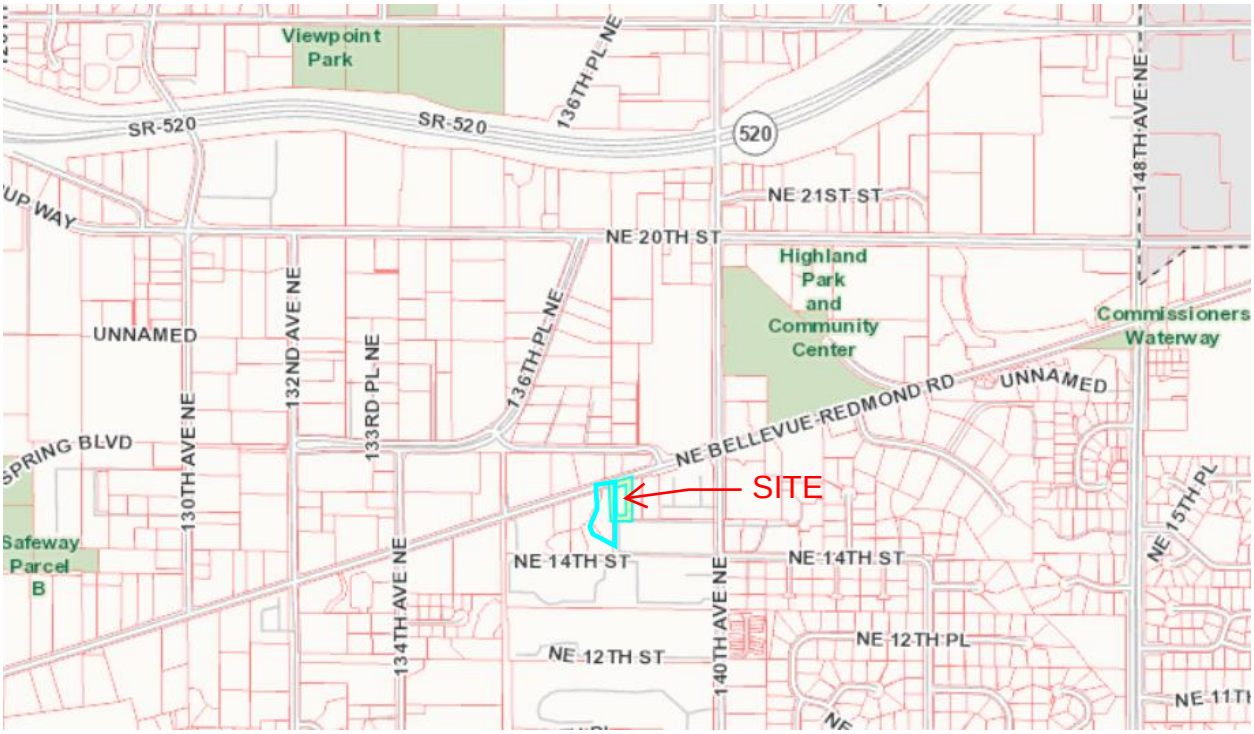
D.Folsom 2/7/2022

Vicinity Map from MapQuest (top) and iMap (bottom)



D.Folsom 2/7/2022

Vicinity Map



December 17, 2021

Earl Caditz
Early World Children's School
13831 NE Bellevue Redmond Road
Bellevue, WA 98005

Re: Early World Children's School – Critical Areas Narrative
The Watershed Company Reference Number: 060926

Introduction

This document is intended to demonstrate compliance with the City of Bellevue's Land Use Code (LUC) 20.25H.055, which authorizes the repair of existing bridges within stream critical areas.

Critical Areas Narrative

Description of the project site, including landscape features, existing development, and site history as applicable.

Response: The project site is located at 13831 NE Bellevue-Redmond Road in Bellevue, WA (tax parcels 2725059184 and 2725059185)(project site). Residential uses are located to the east and south of the project site. Areas of open space and commercial offices are located west of the site. Commercial and retail uses are located north of the site across NE Bellevue-Redmond Road.

The project site is currently occupied by a day care center called Early World Children's School. Two bridges, over Kelsey Creek, provide vehicular access to the site from NE Bellevue-Redmond Road, with the school building centered between the driveways. Several adjacent properties also utilize the bridges, pursuant to access easements. The western driveway (lower bridge) is a one-way entrance into the site, while the middle driveway is a one-way exit. The lower bridge is comprised of wood and is susceptible to wood rot.

Parking for the school is located north of the middle bridge, along both sides of the school building, and in the rear of the structure. The bridges provide access over

Kelsey Creek, which flows in a west-northwesterly direction as it passes through the project site.

The site is relatively flat, with the exception of the banks of Kelsey Creek, which in some areas are vertical with sheet pile walls. This particular segment of Kelsey Creek is highly urbanized and constrained in several sections by the sheet pile walls up to 10 feet tall. Portions of the stream (particularly upstream of the site) were enhanced in 2010, which included installation of large woody debris, coir lifts, boulders, and native vegetation in an effort to stabilize portions of stream bank, slow flows within the creek, and provide additional in-stream habitat. Vegetation elsewhere along the creek is either sparse or overgrown with non-native species including Himalayan blackberry and Japanese knotweed.

Kelsey Creek is classified as a Type F (fish-bearing) stream and eventually flows into Mercer Slough and Lake Washington. Type F streams on sites with existing primary structures require standard buffer widths of 50 feet. No additional critical areas, including wetlands, are found on-site or in the immediate vicinity.

A description of how the design constitutes the minimum necessary impact to the critical area.

Response: The exiting lower bridge located at Early World Children's School in the City of Bellevue has deteriorated to a point that it is no longer useable. Therefore, repair of the bridge is proposed. The proposed repaired bridge will cross Kelsey Creek in the same location and will be the same size as the existing bridge. All portions of the repaired bridge would continue to be positioned above both sheet pile walls at the same approximate elevation as the existing structure. Thus, the bridge would be located completely above the stream's ordinary high water mark. However, in order to provide adequate loading capabilities, approximately 13 three-inch-diameter pipe piles will be added within the stream channel, adjacent to the existing sheet pile walls. Engineering analysis determined that the existing abutments alone cannot support the repaired bridge. Therefore, it was determined that pipe piles are necessary in order to properly support the bridge and there is no location outside of the stream channel to place the pipe piles. The piles will be located inside of the perimeter of the existing sheet piles walls, such that they will not extend any further waterward than the exterior edges of the sheet pile walls.

Impacts have been minimized to the greatest extent feasible by limiting the size of the bridge to the same as the existing structure. Further, standard BMPs will be followed to minimize disturbance during construction.

A description of why there is no feasible alternative with less impact to the critical area, critical area buffer, or critical area structure setback.

Response: The existing bridge allows for adequate and safe site access and circulation; therefore, the failed bridge must be repaired in order to restore this condition. There is no other location that can provide for this purpose because any new crossing location would be more impactful to the stream and buffer than re-use of the existing bridge location.

A description of alternatives considered and why the alternative selected is preferred.

Response: As described above, there are no realistic alternatives available that will fulfil the project purpose.

A summary of how the proposal meets each of the decision criteria contained in Land Use Code Section 20.30P.

A. The proposal obtains all other permits required by the Land Use Code;

Response: The project applicant has applied for a Critical Areas Land Use Permit (LO) to place an allowed use within a stream and stream buffer. No other City of Bellevue land use permits are required of the project at this time.

B. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;

Response: The bridge repair will occur over a portion of Kelsey Creek that is hardened on both banks by existing sheet pile walls. All portions of the repaired bridge will continue to be positioned above both sheet pile walls at the same approximate elevation as the existing structure. The repaired bridge would be located completely above the stream's ordinary high water mark and would not increase in size.

C. The proposal incorporates the performance standards of Part 20.25H LUC to the maximum extent applicable;

Response: See below for stream critical area (per LUC 20.25H.080.A) performance standard compliance.

D. The proposal will be served by adequate public facilities including streets, fire protection, and utilities;

Response: The existing site is served by adequate public facilities. No increase in demand for public services will result from the proposed bridge repair project.

E. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC 20.25H.055.C.3.i shall not require a mitigation or restoration plan;

Response: A mitigation plan has been prepared in accordance with the requirements of LUC 20.25H.210. The plan (*Early World Children's School Lower Bridge Repair Mitigation Plan*. The Watershed Company. December 2021) has been submitted concurrently with this project narrative.

F. The proposal complies with other applicable requirements of this code.

Response: The proposed project complies with all other applicable City of Bellevue Land Use Codes.

A summary of how the proposal meets each of the criteria and performance standards contained in Land Use Code Section 20.25H associated with the critical area you are modifying.

Response: 'New or expanded bridges' within stream critical areas are allowed pursuant to LUC 20.25H.055.B, so long as compliance with LUC 20.25H.055.C.2, LUC 20.25H.055.C.3.e, and LUC 20.25H.080.A is shown. While the footprint of the bridge will not be expanded as part of the repair activities, the utilization of new pipe piles within the stream channel means that the project is considered a 'new or expanded bridge', rather than 'repair and maintenance of bridges'. A discussion of compliance with these sections is presented below.

20.025H.055.C.2 Performance Standards.

New and Expanded Uses or Development. As used in this section, "facilities and systems" is a general term that encompasses all structures and improvements associated with the allowed uses and development described in the table in subsection B of this section:

New or expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically feasible alternatives will consider:

The location of existing infrastructure;

Response: The existing bridge provides access to the site from Bel-Red Road. Additional adjacent parcels also utilize the bridge, pursuant to access easements. Relocating the bridge to a new location would result in new impacts to the stream and stream buffer, as new bridge supporting infrastructure (abutment, approaches, etc.) would be required. Thus, impacts are minimized by utilizing the existing supportive infrastructure already in place.

The function or objective of the proposed new or expanded facility or system;

Response: The proposed project would repair an existing failing bridge which is no longer usable. The repaired bridge will reestablish vehicular access to the site and allow for adequate site circulation, resulting in safer traffic flow.

Demonstration that no alternative location or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside of the critical area;

Response: The immediate purpose of the proposed project is to repair a failing bridge. The bridge provides for full and safe site circulation. Additional adjacent parcels also utilize the bridge, pursuant to access easements. The stream crossing is necessary to allow for vehicular access. It is not possible to provide site access outside of the critical area and there are no alternate locations where critical area and buffer impacts would be further minimized. Reusing the existing bridge location results in the fewest impacts.

Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and

Response: Avoidance of critical area and buffer impacts would prevent repair of the existing bridge and site circulation and safety would remain compromised.

The ability of both permanent and temporary disturbance to be mitigated.

Response: The existing bridge can be repaired, including all construction staging, from areas of existing pavement. This includes the installation of pipe piles, which can be installed from adjacent paved areas. Therefore, temporary disturbance will be avoided and minimized to the greatest extent feasible. Permanent disturbance will include the footprint of the bridge, though the footprint will not increase compared to the existing, and the addition of 13 pipe piles adjacent to the existing sheet pile walls. To compensate for project impacts, 1,200 square feet of stream buffer will be restored by removing invasive species and replanting with native vegetation. Dense native plantings in the degraded buffer would improve buffer functions overall.

If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the following:

Location and design shall result in the least impacts on the critical area or critical area buffer;

Response: The existing bridge is being repaired to maintain site circulation and safety. The footprint of the bridge will not be expanded; there will be no increase in overwater cover. Repairing the bridge in the existing location will result in the least amount of impact to the stream; no additional shading or impervious surface will be added, as the footprint will not be expanded.

Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized;

Response: Repair of the bridge will result in the same footprint as the existing bridge; no increase in overwater cover will result. Pipe piles have been sized and quantified to the minimum necessary to provide structural support for the loads

necessary for the repaired bridge. Further, standard BMPs will be followed to minimize disturbance during construction.

Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists;

Response: No other technically feasible location for the bridge repair project exists. Engineering analysis determined that the existing abutments alone cannot support the repaired bridge. Therefore, it was determined that pipe piles are necessary in order to properly support the bridge and there is no location outside of the stream channel to place the pipe piles. The piles will be located inside of the perimeter of the existing sheet piles walls, such that they will not extend any further waterward than the exterior edges of the sheet pile walls. Pipe pile installation would occur within any WDFW required work windows.

Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the critical area or critical area buffer;

Response: The proposed bridge repair is the minimum necessary to maintain site circulation and safety. The design of the repaired bridge utilizes the same footprint as the existing bridge, such that overwater impacts will not increase.

All work shall be consistent with applicable City of Bellevue codes and standards;

Response: The proposed impacts are stemming from repair of an existing bridge over Kelsey Creek. Unavoidable critical area and buffer impacts will be minimized and mitigated per City of Bellevue codes. The proposed project will comply with all other applicable City of Bellevue Land Use Codes, including 20.25H and 23.76.

The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

Response: The addition of several three-inch-diameter pipe piles within the stream channel will not have a significant adverse impact on overall aquatic area peak flows, duration, storage capacity, or hydroperiod. The piles will be located inside of the perimeter of the existing sheet piles walls, such that they will not extend any further waterward than the exterior edges of the sheet pile walls. Flood storage capacity will not be affected; current geomorphology of the creek does not contain any oxbows or wetlands that increase flood storage and the existing stream channel has steep walls that will be over-topped in a flooding scenario.

Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists; and

Response: No new parking or other support facilities are proposed as part of the bridge repair project.

Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

Response: As mitigation for the bridge repair project, a mitigation plan has been developed (*Early World Children's School Lower Bridge Repair Mitigation Plan*. The Watershed Company. December 2021). The plan has been prepared pursuant to LUC 20.25H.210 and satisfies the stream and stream buffer mitigation requirements of LUC 20.25H.085. A total of 1,200 square feet of buffer mitigation is proposed for permanent impacts to the critical area and buffer. Mitigation will occur in an area adjacent to the stream, just west and downstream of the bridge repair location. The mitigation area is currently overgrown with invasive Himalayan blackberry and English ivy and has high potential for restoration. Existing native plants onsite will be retained; no existing trees will be removed. Native species proposed include western red cedar, western hemlock, vine maple, beaked hazelnut, Oregon grape, Pacific ninebark, clustered rose, common snowberry, evergreen huckleberry, red-twig dogwood, Hooker's willow, and western sword fern. Native plantings will provide overhanging vegetation to supplement the stream with detritus and insects, benefiting aquatic species; filtered shade; future recruitment of woody debris; and upland wildlife habitat. Improved function of the restored buffer will ensure equivalent or better protection of stream and stream buffer functions and values.

20.25H.055.C.3.e New or Expanded Bridges and Culverts.

New culverts shall be designed in accordance with the Washington State Department of Fish and Wildlife "Design of Road Culverts for Fish Passage" now or as hereafter amended. Culvert expansions shall be considered new culverts and be required to be designed in accordance with "Design of Road Culverts for Fish Passage" now or as hereafter amended when the expansion is associated with a project increasing vehicular capacity and (i) there are fish present downstream; (ii) there is potential fish habitat upstream; and (iii) the benefits of so designing the culvert are substantial when compared to expanding the culvert based on its then-existing design.

Response: N/A

20.25H.080.A Performance Standards.

Development on sites with a type S or F stream or associated critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

Lights shall be directed away from the stream.

Response: No lights are proposed for the repaired bridge.

Activity that generates noise such as parking lots, generators, and residential uses shall be located away from the stream or any noise shall be minimized through use of design and insulation techniques.

Response: The bridge repair project will not result in the generation of additional on-site noise. An increase in vehicular traffic will not result from the proposed project and noise levels are not expected to increase compared to current site conditions.

Toxic runoff from new impervious area shall be routed away from the stream.

Response: The repaired bridge will be constructed of impervious materials. However, the repairs will not result in an increase in toxic runoff to the stream. In fact, the addition of 1,200 square feet of native plantings adjacent to the stream will

help to filter pollutants from on-site runoff from existing parking lots, thereby resulting in a net increase of on-site stormwater functions.

Treated water may be allowed to enter the stream critical area buffer.

Response: No change in on-site runoff patterns or drainage facilities is proposed. However, new native plantings adjacent to the stream will help to filter pollutants and infiltrate stormwater prior to it reaching the stream.

The outer edge of the stream critical area buffer shall be planted with dense vegetation to limit pet or human use.

Response: A degraded portion of the critical area buffer, 1,200 square feet in size, will be planted with native species. The plantings are intended to mitigate for impacts associated with the repaired bridge over Kelsey Creek. A detailed mitigation plan using only native species has been prepared for the project area. A total of 1,200 square feet of dense native plantings are proposed. Proposed species include western red cedar, western hemlock, vine maple, beaked hazelnut, Oregon grape, Pacific ninebark, clustered rose, common snowberry, evergreen huckleberry, red-twig dogwood, Hooker's willow, and western sword fern. Native plantings will provide overhanging vegetation to supplement the stream with detritus and insects, benefiting aquatic species; filtered shade; future recruitment of woody debris; and upland wildlife habitat.

Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream critical area buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.

Response: Generally, weed control efforts in the stream buffer will employ manual removal. If any persistent weed or pest problems require pesticide control, the City would be contacted to verify compliance with City of Bellevue BMPs and, if allowed, a licensed pesticide applicator would be hired.

Conclusion

The proposed bridge repair complies with all City of Bellevue critical area regulations, including mitigation provisions. Overall, the project will result in equivalent or better protection of stream and stream buffer functions.

Kenny Booth, AICP
Senior Planner

Grace Brennan
Ecologist

TECHNICAL MEMORANDUM

Date:	8/9/2021
To:	Earl Caditz
From:	Grace Brennan
Project Name:	Early World Children's School Bridge Replacement
Project Number:	060926

Subject: Early World Children's School Bridge Repair Kelsey Creek Memo

On June 15, 2021, Ecologist Grace Brennan and other Watershed Company personnel visited the Early World Children's School located at 13831 Bel-Red Road (parcels #272505-9184, 9185, and -9195) in the City of Bellevue, Washington to evaluate and delineate the on-site segment of Kelsey Creek. This letter summarizes the stream findings of the study and associated City of Bellevue regulations.

The following document is enclosed:

- Kelsey Creek Delineation Figure

Summary

One stream, Kelsey Creek, is present in the study area. Kelsey Creek is a well-documented fish bearing stream, classifying it as a Type-F water. The City of Bellevue requires a 50-foot standard buffer for Type-F waters on developed sites.

Methodology

The study area was evaluated for streams based on the presence or absence of an ordinary high water mark (OHWM) as defined by Section 404 of the Clean Water Act, the Washington Administrative Code (WAC) 220-660-030, and the Revised Code of Washington (RCW) 90.58.030. The mapped stream was classified per City of Bellevue Land Use Code (LUC 20.25H.075) and WAC 222-16-030.

Public-domain information on the subject property was reviewed for this study and includes the following:

- USDA NRCS: Web Soil Survey
- WA DNR Forest Practices Application Mapping Tool (DNR FPARS)

- City of Bellevue GIS Map Viewer
- King County iMap

Characterization of climatic conditions for precipitation was determined using the WETS table methodology from the USDA NRCS document Part 650 Engineering Field Handbook, National Engineering Handbook, Hydrology Tools for Wetland Identification and Analysis, Chapter 19 (September 2015). The Seattle-Tacoma International AP station as recorded by NOAA (http://agacis.rcc-acis.org/) was used as a source for precipitation data. The WETS table methodology uses climate data from the three months prior to the site visit month to determine if normal conditions are present.

Findings

The subject property is within the Kelsey Creek sub-basin of the Cedar – Sammamish watershed (WRIA 8); Section 27 of Township 25 North, Range 05 East of the Public Land Survey System. Surrounding land use is categorized high intensity residential and commercial areas.

The study area is currently developed with the existing school buildings and associated parking and play areas. Parcels immediately to the east and west are developed with multi-family residences. The school buildings are on a moderate slope that leads down to Kelsey Creek, which runs along the northern boundary of the subject parcels and the southern edge of Bel-Red Road. A majority of the site is maintained as the school and associated buildings, driveways, and parking areas. Many large trees have been retained on-site, which creates a fairly robust native tree canopy throughout much of the site.

Kelsey Creek

Kelsey Creek runs west through the study area, running under two existing bridges within the subject parcel. One of those bridges is currently in disrepair and is closed for safety. The on-site segment of the stream sits at the bottom of steep retaining walls and rockeries that are approximately 10 feet tall on average. Substrate includes gravel and cobble with some large rocks throughout the channel area. In between the two bridges there is relatively low cover over the stream, with nearby plantings consisting of primarily ornamental landscaping. English ivy covers the rockery and retaining walls for much of this area. Downstream areas of the stream are shaded by a big-leaf maple canopy.

Figure 1. Segment of Kelsey Creek running between the two Early World bridges.

Figure 2. On-site segment of Kelsey Creek.

The stream channel is heavily armored throughout the study area, with vertical sheet-pile retaining walls or rockeries lining the edge. The channel is approximately 15 feet wide on-site and runs at a gradient of less than one percent on average through the study area. The channel, both upstream and downstream from the study area, is similar in nature to the on-site segment, with a gradual gradient, steep armored banks, and riparian vegetation including big-leaf maple and English ivy.

Kelsey Creek is a well-documented fish bearing stream. For developed properties, the City of Bellevue requires 50-foot buffers for Type F streams, along with a 50-foot structure setback.

City of Bellevue allows for repair and maintenance of bridges provided that there is no removal of significant trees and that areas of temporary disturbance associated with the work are restored to pre-project conditions pursuant to a restoration plan (LUC 20.25H.055).

Disclaimer

Please note: The information contained in this email is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria outlined in the methods section. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available to us at the time the study was conducted. All work was completed in good faith, within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, State and Federal regulatory authorities. No warranty, expressed or implied, is made.

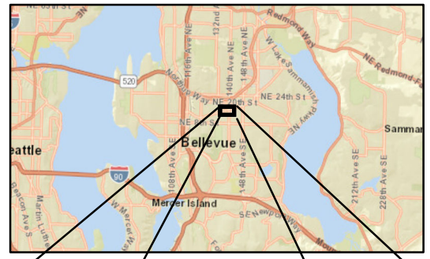
Should you have any questions or concerns regarding our findings, please feel free to contact me.

Sincerely,

Grace Brennan
Ecologist

KELSEY CREEK DELINEATION FIGURE

0 4.5 9 18 27 Feet



VICINITY MAPS

NOTES:

1. CRITICAL AREAS DELINEATED BY THE WATERSHED COMPANY ON JUNE 15, 2021.
2. GPS DATA DISPLAYED ON THIS MAP WAS COLLECTED IN THE FIELD USING AN TRIMBLE GPS. GPS DATA IS BELIEVED RELIABLE FOR GENERAL PLANNING AND MOST REGULATORY PURPOSES. HOWEVER, ACCURACY IS VARIABLE AND SHOULD NOT BE CONSIDERED EQUIVALENT TO A PROFESSIONAL LAND SURVEY. NO WARRANTY IS EXPRESSED OR IMPLIED.

LEGEND:

- CRITICAL AREA BUFFER
- KELSEY CREEK UNDELINEATED OHWM
- KELSEY CREEK DELINEATED OHWM

THE WATERSHED COMPANY
750 Sixth Street South
Kirkland, WA 98033
p:425.822.5242
www.watershedco.com
Science & Design

EARLY WORD SCHOOL BRIDGE REPAIR

STREAM DELINEATION FIGURE
PREPARED FOR EARL CADITZ
PARCELS#: 272505-9184, 9185, & -9195
13831 BEL-RED ROAD
BELLEVUE, WA

SUBMITTALS AND REVISIONS

NO.	DATE	DESCRIPTION	BY
1	08-09-2021	DELINEATION FIGURE	GB

SHEET SIZE: 11X17
PROJECT MANAGER: JKB
DESIGNED: AL
DRAFTED: GB
CHECKED: JKB
JOB NUMBER: 060926

SHEET NUMBER: 1 OF 1

STRUCTURAL NOTES

1000 GENERAL

1001 GENERAL REQUIREMENTS

THE STRUCTURAL NOTES SUPPLEMENT THE PLANS AND SPECIFICATIONS. ANY DISCREPANCY FOUND BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, SITE CONDITIONS, AND ARCHITECTURAL PLANS SHALL BE REPORTED TO THE ARCHITECT WHO SHALL CORRECT THE DISCREPANCY IN WRITING. ANY WORK COMPLETED AFTER DISCOVERY OF THE DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. REFER TO ARCHITECTURAL PLANS FOR OPENINGS, ARCHITECTURAL TREATMENTS, AND DIMENSIONS NOT SHOWN. CONSULT MECHANICAL PLANS FOR DUCTS, PIPES, ETC. NOT SHOWN.

THE CONTRACTOR SHALL PROVIDE BRACING AND SUPPORT REQUIRED FOR TEMPORARY CONSTRUCTION LOADS AND FOR STRUCTURAL COMPONENTS AS REQUIRED DURING ERECTION. BACKFILL BEHIND WALLS SHALL NOT BE PLACED UNTIL THE WALLS ARE PROPERLY SUPPORTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL WORK INCLUDING BUT NOT LIMITED TO EXCAVATION, SHORING, AND OTHER WORK WITH ALL UTILITIES AND ADJACENT PROPERTIES. CALL THE UTILITY LOCATE SERVICE PRIOR TO ANY WORK AT 1-800-424-5555.

1002 CODE REQUIREMENTS

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2009 INTERNATIONAL BUILDING CODE AS ADOPTED BY THE LOCAL JURISDICTION. BRIDGE DESIGN SHALL CONFORM TO 2010 AASHTO.

1003 DESIGN LIVE LOADS / DATA

LIVE LOADS
AASHTO
TRUCK AXLE HS20-44
UNIFORM LOAD 640plf PER 10ft LANE
SNOW LOAD DESIGN DATA
Pg = 20 PSF Pf = 20 PSF Ce = 0.9 Is = 1.0 Ct = 1.0

EARTHQUAKE DESIGN DATA
SEISMIC IMPORTANCE FACTOR Ie = 1.0
SPECTRAL RESPONSE ACCELERATIONS Ss = 1.33 S1 = 0.45
SITE CLASS SITE CLASS C

1004 GEOTECHNICAL INVESTIGATION

EARTHWORK AND FOUNDATIONS SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. SEE THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY ASSOCIATED EARTH SCIENCES INC DATED MAY 26TH, 2011. BRIDGE ABUTMENTS SHALL BE SUPPORTED ON DRILLED CONCRETE PIERS. ALLOWABLE BEARING CAPACITY OF 16' dia PIER IS 48kip - WITH 10ft EMBEDMENT INTO THE DENSE BEARING STRATUM.

DESIGN PARAMETERS ARE AS FOLLOWS:
ACTIVE EARTH PRESSURE (YIELDING) 35 PCF
ACTIVE EARTH PRESSURE (AT-REST) 50 PCF
PASSIVE EARTH PRESSURE 250 PCF (ALLOWABLE)
COEFFICIENT OF FRICTION 0.35 (ALLOWABLE)
SOIL PROFILE SITE CLASS C

1005 REQUIRED SUBMITTAL PROCEDURES BE SUBJECT TO APPROVAL OF THE GEOTECHNICAL ENGINEER.

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SUBMITTALS TO THE ENGINEER OF RECORD FOR APPROVAL FOUR WEEKS PRIOR TO POUR OF CONCRETE OR FABRICATION.
SHOP DRAWINGS
SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION. IF SHOP DRAWINGS DIFFER FROM THE APPROVED DESIGN DRAWINGS, NEW DESIGN DRAWINGS BEARING THE SEAL AND SIGNATURE OF A LICENSED WASHINGTON STATE STRUCTURAL ENGINEER SHALL BE SUBMITTED ALONG WITH THE SHOP DRAWINGS TO THE APPROPRIATE JURISDICTION FOR APPROVAL PRIOR TO FABRICATION.
SHOP DRAWINGS ARE REQUIRED FOR: CONCRETE REINFORCEMENT, STRUCTURAL STEEL, GLUED LAMINATED BEAMS.
CONCRETE MIX DESIGN
RE: SECTION 3001
SUBSTITUTION REQUEST
DEFERRED SUBMITTAL

1006 CODE REQUIRED SPECIAL INSPECTIONS

THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT. IN ADDITION TO INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT, THE OWNER OR A REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS FOR ITEMS NOTED IN IBC SECTION 1704 WHICH ARE SUMMARIZED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET S1.01.

THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON EMPLOYED BY AN APPROVED AGENCY. THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF INSPECTIONS AND FURNISH THEM TO THE BUILDING OFFICIAL AND THE ENGINEER OF RECORD ON A REGULAR BASIS. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND THE CORRECTION OF ANY DISCREPANCIES SHALL BE PROVIDED PRIOR TO COMPLETION OF BUILDING FINISHES. WHERE FABRICATION OF STRUCTURAL COMPONENTS AND ASSEMBLES IS BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTION OF THE FABRICATED ITEMS SHALL BE REQUIRED EXCEPT HERE THE FABRICATOR IS REGISTERED AND APPROVED TO DO SUCH WORK WITHOUT SPECIAL INSPECTION IN ACCORDANCE WITH IBC SECTION 1704.2.2. PERIODIC INSPECTION ALLOWS INSPECTION AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS. CONTINUOUS SPECIAL INSPECTION REQUIRES THAT THE INSPECTOR [illegible] REQUIRING SPECIAL INSPECTION IS PERFORMED.

1007 STRUCTURAL OBSERVATION SERVICES

STRUCTURAL OBSERVATION SHALL BE REQUIRED. STRUCTURAL OBSERVATION SHALL BE THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR REQUIRED SPECIAL INSPECTION AS NOTED IN SECTION 0140O OR FOR INSPECTIONS REQUIRED BY THE LOCAL JURISDICTION. THE OWNER OR OWNER'S AGENT SHALL RETAIN A REGISTERED DESIGN PROFESSIONAL TO PERFORM STUCTURAL OBSERVATIONS FOR ITEMS LISTED WITHIN THE STRUCTURAL OBSERVATION SCHEDULE RE: S1.01.

THE REGISTERED DESIGN PROFESSIONAL SHALL KEEP RECORDS OF STRUCTURAL OBSERVATIONS AND FURNISH THEM TO THE BUILDING OFFICIAL AND THE OWNER ON A REGULAR BASIS. A FINAL DOCUMENT NOTING REQUIRED STRUCTURAL OBSERVATIONS SHALL BE COMPLETED AND THE CORRECTION OF ANY DISCREPANCIES SHALL BE PROVIDED TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY OR

1008 CONTRACTORS RESPONSIBILITY

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS (SECTION XXXX)SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:
1. ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS;
2. ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL;
3. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS; AND
4. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITIONS(S) IN THE ORGANIZATION.

2000 SITE CONSTRUCTION

2001 SITE CONSTRUCTION

ALL SITE CONSTRUCTION SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS AS NOTED IN THE GEOTECHNICAL ENGINEERING REPORT (SEE SECTION 1004) AND IN SUBSEQUENT DIRECTIVES.

2002 EXCAVATION SUPPORT AND PROTECTION

EXCAVATION FOR FOUNDATIONS SHALL BE PER PLAN TO COMPETENT NATIVE MATERIAL PER THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. OVER EXCAVATED AREAS SHALL BE BACKFILLED WITH LEAN CONCRETE OR PER GEOTECHNICAL RECOMMENDATIONS AT THE CONTRACTOR'S EXPENSE.

EXCAVATION SLOPES SHALL BE SAFE AND SHALL NOT BE GREATER THAN THE LIMITS SPECIFIED BY LOCAL, STATE, AND NATIONAL SAFETY REGULATIONS.

INSTALLATION OF CONSTRUCTION SHORING, IF REQUIRED, SHALL BE PER THE SHORING DRAWINGS, NOTES, AND SPECIFICATIONS.

2003 BACKFILL AND COMPACTION

BACKFILL SHALL NOT BE PLACED UNTIL THE REMOVAL OF FORMWORK AND DEBRIS. DO NOT BACKFILL WALLS UNTIL PROPERLY SUPPORTED. ALL BACKFILL MATERIAL AND PLACEMENT PROCEDURES SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS.

3000 CONCRETE

3001 CONCRETE

CONCRETE CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE STANDARD ACI 318-08 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

CEMENT AND CONCRETE SHALL CONFORM TO IBC SECTION 1903. ADMIXTURES SHALL BE APPROVED BY THE ENGINEER OF RECORD AND SHALL COMPLY WITH ACI 318-05 SECTION 3.6. CONCRETE EXPOSED TO FREEZING AND THAWING SHALL HAVE AN AIR ENTRAINING ADMIXTURE CONFORMING TO IBC SECTION 1904.2. THE USE OF WATER SOLUBLE CHLORIDE ION SHALL NOT BE USED.

THE CONTRACTOR SHALL SUBMIT MIX DESIGNS TO ENGINEER OF RECORD FOR APPROVAL FOUR WEEKS PRIOR TO PLACING CONCRETE. MIX DESIGNS SHALL BE REVIEWED FOR CONFORMANCE TO IBC SECTIONS 1904 AND 1905.

CONCRETE MIX DESIGNS SHALL MEET THE FOLLOWING REQUIREMENTS:
(1) 28 DAY STRENGTH f'c [PSI] (2) MAX. WATER / CEMENT RATIO (3) MAX. SLUMP [IN] (4) AIR ENTRAINMENT [%] (5) SPECIAL INSPECTION REQUIRED (6) MIN. 90 LB SACKS OF CEMENT (7) LOCATION AND APPLICATION.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	
5000	0.39	5 +/- 1		5 +/- 1	YES		ABUTMENTS
5000	SPECIAL					AUGER CAST PIERS	
3000	0.50	5 +/- 1		0 +/- 1	YES		ALL OTHER CONCRETE

ONE COMPRESSION TEST MINIMUM SHALL BE COMPLETED FOR EVERY 150 CUBIC YARDS OR 5000 SQUARE FEET OF SURFACE AREA FOR EACH MIX DESIGN PLACED EACH DAY. A TEST SHALL BE THE AVERAGE STRENGTH OF TWO CYLINDERS MADE FROM THE SAME SAMPLE AND TESTED AT THE SPECIFIED AGE. ADDITIONAL CYLINDERS MAY BE MADE FOR INFORMATION REGARDING POST TENSIONING, FORM REMOVAL, STRENGTH DEVELOPMENT, OR OTHER PURPOSES. CONCRETE SHALL BE ACCEPTABLE IF:
1. NO TEST FALLS 500 PSI BELOW THE SPECIFIED STRENGTH
2. THE AVERAGE OF ALL SETS OF 3 CONSECUTIVE TESTS DOES NOT FALL BELOW THE SPECIFIED STRENGTH.
CONCRETE NOT MEETING THE ABOVE CRITERIA SHALL BE SUBJECT TO FURTHER TESTING AT NO ADDITIONAL EXPENSE TO THE OWNER.

RESHORING, WHERE REQUIRED, SHALL CONFORM TO ACI 301 SECTION 4.6. SUBMIT PROPOSED RESHORING PLANS TO THE ENGINEER OF RECORD FOR REVIEW.

CHAMFER ALL EXPOSED CORNERS PER THE ARCHITECTURAL PLANS OR ¾ INCH IF NOT SPECIFIED BY THE ARCHITECT.

3002 REINFORCING STEEL

REINFORCING STEEL DETAILING, FABRICATION, AND PLACEMENT SHALL BE PER ACI 318-05. REINFORCING STEEL SHALL MEET THE FOLLOWING REQUIREMENTS:

ASTM A-615 DEFORMED BARS GRADE 40 (fy=40 KSI) FOR #3 BARS ONLY
ASTM A-615 DEFORMED BARS GRADE 60 (fy=60 KSI) FOR #4 BARS AND LARGER
ASTM A-706 DEFORMED BARS GRADE 60 (fy=60 KSI) FOR ALL WELDABLE BARS
ASTM A-185 SMOOTH BAR (fy=60 KSI) FOR WELDED WIRE FABRIC.

REINFORCING FOR SLABS ON GRADE SHALL BE 6X6 W1.4XW1.4 WELDED WIRE FABRIC UNLESS NOTED OTHERWISE. PROVIDE LAP SPLICES PER THE LAP SPLICE SCHEDULE ON SHEET S6.00. REINFORCING STEEL AT ALL WALLS, SLABS, AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS ELSE CORNER BARS SHALL BE PROVIDED.

COVER REQUIREMENTS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH
ALL BAR SIZES 3"
FORMED SURFACE EXPOSED TO EARTH OR WEATHER
#6 AND LARGER 2"
#5 AND SMALLER 1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER
WALLS AND JOISTS
#14 AND #18 BARS 1 1/2"
#11 BARS AND SMALLER 3/4"
SLABS AND JOISTS
#14 AND #18 BARS 1 1/2"
#11 BARS AND SMALLER 1"
BEAMS, COLUMNS
PRIMARY REINFORCEMENT 1 1/2"
TIES, STIRRUPS, AND SPIRALS 1 1/2"

REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. REINFORCING STEEL SHALL NOT BE FIELD BENT EXCEPT AS NOTED IN THE DESIGN DRAWINGS. WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD EXCEPT AS NOTED ON THE DESIGN DRAWINGS.

3011 CONCRETE REHABILITATION

CONTRACTOR SHALL MAKE AN ALLOWANCE TO PROVIDE FOR CONCRETE REHABILITATION INCLUDING, BUT NOT LIMITED TO, CONCRETE SACKING, PATCHING, REPAIR, SEALING, AND CRACK INJECTION. EXPOSED CONCRETE SHALL BE FINISHED PER ARCHITECT.

5000 STRUCTURAL STEEL

051200 STRUCTURAL STEEL

DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "AISC 360-05 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS". MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING UNO:

STRUCTURAL W SHAPES	ASTM A-992	Fy = 50 KSI
S, M, AND C SHAPES	ASTM A-36	Fy = 36 KSI
STEEL ANGLES	ASTM A-36	Fy = 36 KSI
PLATE MATERIAL	ASTM A-36	Fy = 36 KSI
STRUCTURAL PIPE	ASTM A-53 GRADE B	Fy = 35 KSI
STRUCTURAL HSS	ASTM A-500 GRADE B	Fy = 46 KSI
HEADED STUDS	ASTM A-108	
WELDING ELECTRODES	E7018 CVN 70'# @ -20 DEG. F. ; 40'# @ 70 DEG F.	
HIGH STRENGTH BOLTS	ASTM A-325N BEARING TYPE (SNUG TIGHT) TYP. UNO	
	ASTM A-325SC AT SEISMIC LOAD RESISTING SYSTEM (IE: DRAG STRUTS ETC.)	
WOOD CONNECTION BOLTS	ASTM A-307 GRADE A	

ALL WELDING SHALL CONFORM TO THE AWS D1-1 "STRUCTURAL WELDING CODE" AND AISC 341-05 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS" APPENDIX W. ALL WELDING SHALL BE PERFORMED BY A WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO) AND AMERICAN WELDING SOCIETY (AWS) CERTIFIED WELDERS. ALL COMPLETE PENETRATION (CP) WELDS SHALL BE ULTRASONICALLY TESTED. ALL FILLET WELDS SHALL BE VISUALLY INSPECTED RE: S1.01.

STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A-123. ALL FIELD WELDS EXPOSED TO WEATHER SHALL BE COATED WITH BRUSH APPLIED ZINC-RICH PAINT COMPLYING WITH ASTM A-780.

6000 WOOD FRAMING

060500 PRESERVATIVE TREATED WOOD PRODUCTS

PRESERVATIVE TREATED WOOD SHALL BE REQUIRED FOR:

ALL WOOD THAT FORMS THE STRUCTURAL SUPPORT OF THE BUILDING, BALCONIES PORCHES, OR SIMILAR PERMANENT BUILDING APPURTUENCES THAT ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING TO PREVENT MOISTURE OR WATER ACCUMULATION AT THE SURFACE OR AT JOINTS BETWEEN MEMBERS.

ALL WOOD INSTALLED ABOVE GROUND AND RESTING ON AN EXTERIOR CONCRETE OR MASONRY FOUNDATION WALL LESS THAN 8 INCHES FROM EXPOSED EARTH.

POSTS OR COLUMNS SUPPORTING PERMANENT STRUCTURES AND SUPPORTED BY A CONCRETE SLAB OR FOOTING THAT IS IN DIRECT CONTACT WITH THE EARTH. EXCEPT:

1. IF LOCATED IN BASEMENTS ON A CONCRETE PIER OR METAL PEDESTAL 1 INCH ABOVE THE SLAB AND SEPARATED THEREFROM BY AN IMPERVIOUS MOISTURE BARRIER.

2. IF IN AN ENCLOSED CRAWL SPACE OR AN UNEXCAVATED AREA WITHIN THE BUILDING PERIPHERY AND SUPPORTED BY A CONCRETE PIER OR PEDESTAL MORE THAN 8 INCHES FROM EXPOSED GROUND AND SEPARATED THEREFROM BY AN IMPERVIOUS MOISTURE BARRIER.

3. SLEEPERS AND SILLS ON A CONCRETE SLAB ON GRADE THAT DOES NOT HAVE AN IMPERVIOUS MOISTURE BARRIER SEPARATION WITH EXPOSED EARTH.

4. LEDGERS AND FURRING ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR CONCRETE OR MASONRY WALLS BELOW GRADE.

PRESERVATIVE TREATMENT SHALL BE PER AMERICAN WOOD PRESERVERS' ASSOCIATION (AWPA) SPECIFICATION C2 AND C9 OR APPLICABLE STANDARDS.

ALL FASTENERS (NAILS, BOLTS, ANCHOR BOLTS, PLATES, AHNGERS, ETC.) IN CONTACT WITH TREATED LUMBER SHALL BE CORROSION RESISTANT AS FOLLOWS:

Environment	SBX/DOT/Zinc Borate	MCQ	ACQ-C, ACQ-D, CA-B, CBA-A	ACZA
Interior Plates	G90	G90	HDG	SS
Exterior Plates	NA	HDG	SS	SS
Exterior Exposed Lumber	NA	HDG	SS	SS

WHERE:
1. G90 = ZINC GALVANIZED FINISH CONTAINING 0.90oz OF ZINC PER sqft ALL SIDES.
2. HDG = HOT-DIP GALVANIZED AFTER FABRICATION WITH MIN. COATING OF 2.0oz OF ZINC PER sqft ALL SIDES.
3. SS = STAINLESS STEEL OF TYPE 303, 304, 305 OR 316

061000 ROUGH FRAMING

SAWN LUMBER SHALL CONFORM TO WEST COAST LUMBER INSPECTION BUREAU (WCLIB) "GRADING AND DRESSING RULES" NO. 17 LATEST EDITION. SAWN LUMBER SHALL BE S4S AND SURFACED DRIED, 19 PERCENT MAXIMUM MOISTURE CONTENT. PROTECT LUMBER FROM WEATHER AND PROVIDE FURTHER DRYING OF ASSEMBLED FRAMING TO MINIMIZE WOOD SHRINKAGE POTENTIAL. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED UNLESS NOTED OTHERWISE PER PLAN. LUMBER SPECIES, GRADE, AND PROPERTIES FOR EACH USE/LOCATION SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE PER PLAN/SCHEDULE:

USE/LOCATION	SPECIES	GRADE	Fb (PSI)	Fv (PSI)	Fcp (PSI)	Fc (PSI)	E (PSI)
WALL STUDS/BLOCKING							
2X, 3X 4" WIDE	HEM-FIR	NO. 2	850	150	405	1300	1.3E6
2X, 3X 6" & WIDER	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E
WALL PLATES							
2X4, 3X4	DOUGLAS FIR-LARCH	STUD	700	180	625	850	1.4E6
2X6, 3X6	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E
JOISTS							
2X, 3X	HEM-FIR	NO. 2	850	150	405	1300	1.3E6
	SPRUCE-PINE-FIR	NO. 2	875	150	425	1150	1.4E6
	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
LEDGERS							
2X, 3X	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
4X	DOUGLAS FIR-LARCH	NO. 1	1000	180	625	1500	1.7E6
BEAMS AND POSTS							
4X	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
6X	DOUGLAS FIR-LARCH	NO. 1	1200	170	625	1000	1.6E6

061002 JOIST AND BEAM HANGERS

JOIST AND BEAM HANGERS AS NOTED IN THE PLANS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE. EQUIVALENT HARDWARE MAY BE USED WITH PRIOR APPROVED BY ENGINEER OF RECORD. JOIST AND BEAM HANGERS SHALL BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS AND SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE PER PLANS OR DETAILS:

MEMBER SIZE	HANGER
SAWN LUMBER	"U" SERIES TO MATCH LUMBER SIZE
3.50" WIDE GLULAM BEAM	GLTV4
5.44" WIDE GLULAM BEAM	GLTV6
7.00" WIDE GLULAM BEAM	GLTV7.12
8.75" WIDE GLULAM BEAM	HGLT9
MANUFACTURED WOOD "I" JOIST	"ITT" SERIES TO MATCH "I" JOIST SIZE
1.75" WIDE PSL OR LVL BEAM	"LBV" TO MATCH DEPTH
2.69" WIDE PSL BEAM	"LBV" SERIES TO MATCH DEPTH
3.5" WIDE PSL OR LVL BEAM	"GLTV" SERIES TO MATCH DEPTH
5.25" WIDE PSL OR LVL BEAM	"GLTV" SERIES TO MATCH DEPTH
7" WIDE PSL BEAM	"HGLTV" SERIES TO MATCH DEPTH

061003 SHRINKAGE OF WOOD FRAMING

SHRINKAGE IN WOOD FRAMING IS DUE TO LOSS OF MOISTURE CONTENT AND TO COMPRESSION OF ASSEMBLIES OF WOOD COMPONENTS. PLUMBING, ELECTRICAL, AND MECHANICAL SYSTEMS AS WELL AS EXTERIOR FINISHES SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 1/4 INCH PER FLOOR WOOD SHRINKAGE. THE USE OF KILN DRIED LUMBER AND PROVIDING A DRYING PROCESS TO THE FRAMING MEMBERS PRIOR TO APPLICATION OF FINISHES WILL HELP CONTROL BUT WILL NOT ELIMINATE SHRINKAGE.

061813 STRUCTURAL GLUED LAMINATED TIMBER

GLUED LAMINATED MEMBERS SHALL HAVE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) IDENTIFICATION MARK. EXPOSED MEMBERS SHALL RECEIVE ONE COAT OF END SEALER APPLIED IMMEDIATELY AFTER TRIMMING IN EITHER SHOP OR FIELD. SHOP DRAWINGS SHALL BE SUBMITTED PER THE REQUIREMENTS OF SECTION 01330. DESIGN MATERIAL PROPERTIES SHALL BE AS FOLLOWS:

USE	COMBINATION SYMBOL	SPECIES
SIMPLE SPAN BEAM	24F-V4	DF/DF
CONTINUOUS BEAM	24F-V8	DF/DF
CANTILEVER BEAM	24F-V8	DF/DF

GLUED LAMINATED TIMBER EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.

STRUCTURAL DRAWING SHEET INDEX

DRAWING LIST

Sheet	Description	Issue Date	Rev	Rev Date
S1.0	Structural Notes	12/17/21		
S1.1	Structural Notes Cont'd	12/17/21		
S2.0	Existing Plan	12/17/21		
S2.1	Original Bridge Plans	12/17/21		
S2.2	Abutment Plans	12/17/21		
S3.0	Elevations and Details	12/17/21		
S4.0	3D Views of Abutments	12/17/21		

Grand total: 7

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12/17/21

DATE
REVISION
No.

JOB #: 21005
ENG.: RTN
CAD: RTN
SCALE: 3/4" = 1'-0"

KEY ISSUE DATES:
SD: 12/17/21
DD: DD
CD: CD
PERMIT: PD
OTHER: BD

30% Progress Set

Structural Notes
Early World School - West Bridge
13831 Bel-Red Road
Belleuve, WA

S1.0

ABBREVIATIONS

&	AND
@	AT
'	FEET(FOOT)
"	INCH (INCHES)
#	POUND(S)
#	NUMBER
=	EQUAL(S)
A.B.	ANCHOR BOLT
ABV.	ABOVE
ADD.	ADDITIONAL
ADJ.	ADJACENT
ALUM.	ALUMINUM
ALT.	ALTERNATE
APPRX.	APPROXIMATE(LY)
APPROX.	APPROXIMATE
ARCH.	ARCHITECT(URAL)
B.	BOTTOM
BEL.	BELOW
BEN	BOUNDARY EDGE NAILING
B.F.	BRACED FRAME
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BLW.	BELOW
BM.	BEAM
BMU	BRICK MASONRY UNIT
BN	BOUNDARY NAILING
BNDRY.	BOUNDARY
B.O.	BOTTOM OF
B.O.E.	BOTTOM OF EXCAVATION
B.O.F.	BOTTOM OF FOOTING
BRDG.	BRIDGE(ING)
BRG.	BEARING
BTM.	BOTTOM
BTWN.	BETWEEN
C	CAMBER
CAMB.	CAMBER(ED)
CANT.	CANTILEVER(ED)
CF	CUBIC FOOT
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION JOINT
CL	CENTER LINE
CLG.	CEILING
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOS
CTSK.	COUNTERSINK
CTR.	CENTER(ED)
CY	CUBIC YARD
d	PENNY(NAILS)
DB	DROPPED BEAM
DBA	DEFORMED BAR ANCHORS
DBL.	DOUBLE
DCW	DEMAND CRITICAL WELD
DEPT.	DEPARTMENT
DET.	DETAIL
DF	DOUGLAS FIR
DIA.	DIAMETER
DIAG.	DIAGONAL
DIAPH.	DIAPHRAGM
DIM.	DIMENSION
DN.	DOWN
D.O.	DITTO(REPEAT)
DP.	DEEP
D.S.	DRAG STRUT
DWG.	DRAWING(S)
DWL.	DOWEL(S)
(E)	EXISTING
EA.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEV.	ELEVATOR
EMBD.	EMBED(MENT)
EN	EDGE NAIL
ENG.	ENGINEER
EQ.	EQUAL
EQPT.	EQUIPMENT
E.W.	EACH WAY
EXP.	EXPANSION
EXST.	EXISTING
EXT.	EXTERIOR
FAB.	FABRICATION
FB	FLUSH BEAM
FDN.	FOUNDATION
F.F.	FINISH FLOOR
FIN.	FINISH(ED)
FLG.	FLANGE
FLR.	FLOOR
FN	FIELD (FACE) NAIL
F.O.	FINISHED OPENING
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
FRM.	FRAME(ING)
F.S.	FAR SIDE
FT.	FEET(FOOT)
FRTW	FIRE RETARDANT TREATED WOOD
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZE(D)
GB.	GRADE BEAM
GLB	GLUE LAMINATED BEAM
GRD.	GRADE
GWB	GYPSUM WALLBOARD
GYP.	GYPCRETE
H.	HORIZONTAL
HD	HOLDOWN
H.D.G.	HOT DIPPED GALVANIZED
HDR.	HEADER
HGR.	HANGER
HORZ.	HORIZONTAL
HORIZ.	HORIZONTAL
HR	HEADER
H.S.B.	HIGH STRENGTH BOLT
HT.	HEIGHT
I.D.	INSIDE DIAMETER
I.E.	INVERT ELEVATION
I.F.	INSIDE FACE
IN.	INCHE(S)
INFO.	INFORMATION
INT.	INTERIOR
JST.	JOIST
JT.	JOINT
K	KIPS(1000)
LAT.	LATERAL
LB.	POUND(S)
L.B.	LAG BOLT(S)
LG.	LONG(ITUDINAL)
LGTH.	LENGTH
LGMF	LIGHT GAUGE METAL FRAMING
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSH	LONG SLOTTED HOLE(S)
LT. WT.	LIGHT WEIGHT
L.W.	LIGHT WEIGHT
MAS.	MASONRY
MASN.	MASONRY
MAT.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
M.E.J.	MASONRY EXPANSION JOINT
MEZZ.	MEZZANINE
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTL.	METAL
(N)	NEW
N.L.B.	NON-LOAD BEARING
NO.	NUMBER
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
N.W.C.	NORMAL WEIGHT CONCRETE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O.H.	OPPOSITE HAND
OPNG.	OPENING
OPP.	OPPOSITE
ORNT.	ORIENTATE(ION)
OSB	ORIENTED STRAND BOARD
O.W.J.	OPEN WEB JOIST
PAR.	PARALLEL
P/C	PRECAST
PEN	PANEL EDGE NAIL
PERP.	PERPENDICULAR
PL.	PLATE
PL	PROPERTY LINE
PLMBG.	PLUMBING
PLYWD.	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P.T.	PRESERVATIVE TREATED
PT	POST TENSION(ED)
QTY.	QUANTITY
R.	RADIUS
RAD.	RADIUS
RE:	REFERENCE
REF.	REFERENCE
REINF.	REINFORCEMENT(ING)
REQ.	REQUIRED
R.F.	RIGID FRAME
R.O.	ROUGH OPENING
R.S.	ROUGH SAWN
SCH.	SCHEDULE
SCL	STRUCTURAL COMPOSITE WOOD
SCHED.	SCHEDULE
SHT.	SHEET
SIM.	SIMILAR
S.J.	SHRINKAGE CONTROL JOINT
SKW.	SKEW(ED)
S.O.G.	SLAB ON GRADE
SPC.	SPACE(S) (ING)
SPEC.	SPECIFICATION(S)
SQ.	SQUARE
STD.	STANDARD
STGR.	STAGGER
STIFF.	STIFFENER(S)
STIR.	STIRRUP(S)
STL.	STEEL
STRUC.	STRUCTURAL
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED(TION)
SYMM.	SYMMETRICAL
T.	TOP
T.&B.	TOP AND BOTTOM
TEMP.	TEMPORARY
T.&G.	TOUNGE AND GROOVE
THK.	THICK(NESS)
THRD.	THREADED
TN	TOE NAIL
T.O.S.	TOP OF SHEATHING(SLAB)
T.O.W.	TOP OF WALL
TRANSV.	TRANSVERSE
T.O.S..	TOP OF STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE
V.	VERTICAL
VERT.	VERTICAL
VIF	VERIFY IN FIELD
W.	WIDE(WIDTH)
W/	WITH
W/O	WITHOUT
WD.	WOOD
W.H.S.	WELDED HEADED STUDS
W.P.	WORK POINT
W.S.	WELDED STUD
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC
X-STG	EXTRA STRONG
XX-STG	DOUBLE EXTRA STRONG
YD	YARD

SPECIAL INSPECTIONS, TESTING and STRUCTURAL OBSERVATION SCHEDULE

INSPECTION ITEMS	CONTINUOUS	PERIODIC	TESTING	COMMENTS
SOIL AND FOUNDATIONS (IBC 1704.7)				IBC 1704.7
SITE PREPARATION, EXCAVATION AND GRADING		X		GEOTECH
DEWATERING				GEOTECH
AUGER CAST PILES (IBC 1704.8 AND 1810.3.2)	X	X	X	GEOTECH AND CONC.
SUBSURFACE DRAINAGE			X	
FILL PLACEMENT AND COMPACTION	X			GEOTECH
FIELD VERIFICATION OF BEARING CAPACITY		X		GEOTECH
				GEOTECH
CONCRETE CONSTRUCTION (IBC 1704.4)				IBC 1704.4
REINFORCEMENT		X		
EMBEDDED ITEMS		X		
PREPARATION OF TEST SPECIMENS		X	X	
CONCRETE PLACEMENT	X		X	
WELDING (IBC 1704.3.1 AND AWS D1.1)				NOTE 4
WELDED HEADED STUDS		X		
REINFORCING STEEL (AWS D1.4)		X		NOTE 6
EMBEDDED PLATE		X		
WOOD CONSTRUCTION (IBC 1704.6 AND 1707.3)				IBC 1704.6 AND 1707.3
FLOOR DIAPHRAGM NAILING		X		
STRUCTURAL OBSERVATION (IBC 1710)				NOTE 7
CONCRETE CONSTRUCTION		X		NOTE 8
WOOD CONSTRUCTION		X		NOTE 9

INSPECTION SCHEDULE NOTES:

1. ITEMS MARKED WITH AND "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC 1704 BY A CERTIFIED SPECIAL INSPECTOR FROM AN AGENCY APPROVED BY THE JURISDICTION.
2. SPECIAL INSPECTION SHALL NOT REQUIRED FOR WORK IN AN APPROVED FABRICATOR'S PER IBC 1704.2.2. VERIFY APPROVAL WITH JURISDICTION PRIOR TO FABRICATION.
3. CONTINUOUS SPECIAL INSPECTION REQUIRES THE INSPECTOR SHALL BE ONSITE AT ALL TIMES AND THAT WORK REQUIRING SPECIAL INSPECTION IS PERFORMED. PERIODIC SPECIAL INSPECTION SHALL ALLOW INSPECTION AT THE INTERVALS NECESSARY TO CONFORM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH THE REQUIREMENTS.
4. ALL WELDS SHALL BE VISUALLY INSPECTED.
5. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED ULTRASONICALLY.
6. PERIODIC SPECIAL INSPECTION SHALL BE ALLOWED FOR SHOP WELDING OF ASTM A706 REINFORCEMENT NO. 5 OR SMALLER USED FOR EMBEDDED ITEMS, PROVIDED THAT; THE MATERIALS AND THE QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WORK, THAT PERIODIC INSPECTIONS ARE MADE OF WORK IN PROGRESS, AND THAT A VISUAL INSPECTION OF ALL WELDS IS MADE PRIOR TO SHIPMENT OF SHOP WELDED ITEMS.
7. STRUCTURAL OBSERVATION SHALL MEAN THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY THE ENGINEER OF RECORD FOR THE GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL FRAMING SYSTEM PRIOR TO COVER. THE CONTRACTOR SHALL PROVIDE AT LEAST TWO WORKING DAYS NOTICE TO THE ENGINEER OF RECORD PRIOR TO COVERING OF SYSTEMS REQUIRING OBSERVATION. STRUCTURAL OBSERVATION BY THE ENGINEER OF RECORD DOES NOT REPLACE OR WAVE REQUIREMENTS FOR BUILDING INSPECTION BY THE JURISDICTION NOR REQUIREMENTS FOR SPECIAL INSPECTIONS.
8. STRUCTURAL OBSERVATION FOR CONCRETE CONSTRUCTION SHALL CONSIST OF OBSERVATION AT OR NEAR THE COMPLETION OF FORMWORK, REBAR, AND PT TENDON PLACEMENT AND PRIOR TO CONCRETE PLACEMENT ON ALL PT SLABS.
9. STRUCTURAL OBSERVATION FOR WOOD CONSTRUCTION SHALL CONSIST OF OBSERVATION AT OR NEAR THE COMPLETION OF THE FIRST ELEVATED WOOD FLOOR FOR ANCHOR BOLT AND HOLDOWN INSTALLATION, SHEATHING AND STRAPPING NAILING. AND AT OR NEAR COMPLETION OF THE ROOF FRAMING PRIOR TO PLACEMENT OF THE ROOFING.
10. THE SPECIAL INSPECTOR SHALL PROVIDE THE BUILDING OFFICIAL, OWNER, ARCHITECT, ENGINEER OF RECORD, AND CONTRACTOR WITH COPIES OF ALL REPORTS AND TEST RESULTS (IBC 1704.1.2)

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Structural Engineers
160 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0818 (F)
www.ctengineering.com

12/17/21

No.	REVISION	DATE

JOB #: 21005
ENG: RTN
CAD: RTN
SCALE: 3/4" = 1'-0"

KEY ISSUE DATES:
SD: 12/17/21
DD: DD
CD: CD
PERMIT: PD
OTHER: BD

Structural Notes Cont'd

Early World School - West Bridge
13831 Bel-Red Road
Belleuve, WA

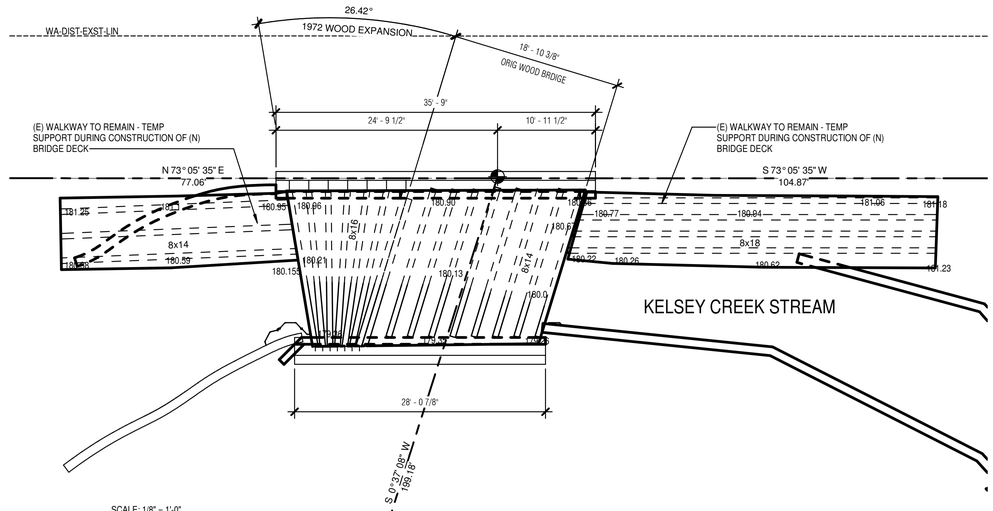
30% Progress Set

S1.1

SCALE: NONE

Key Map

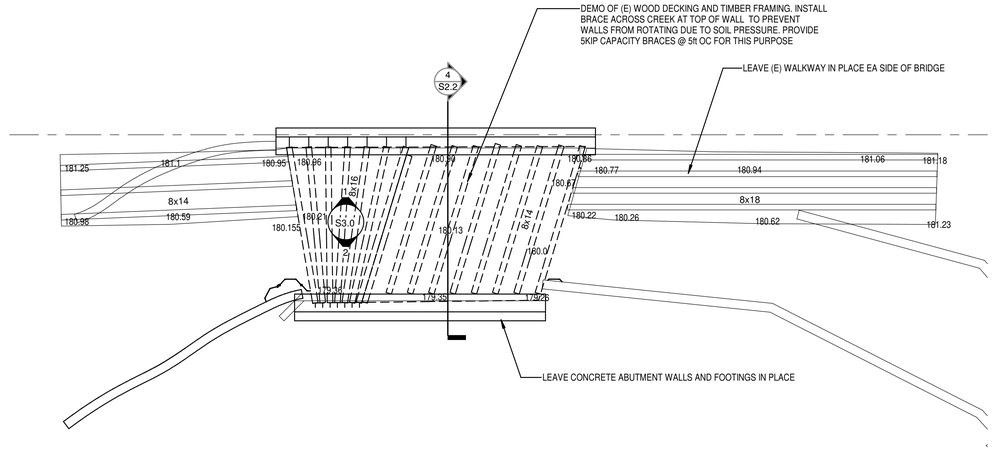
BEL-RED ROAD



SCALE: 1/8" = 1'-0"

1 Plan on West Bridge

BEL-RED ROAD



SCALE: 1/8" = 1'-0"

2 Demo Plan on West Bridge

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12/17/21

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JOB #: 21005
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CAD: RTH
SCALE: As indicated

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PERMIT: PD
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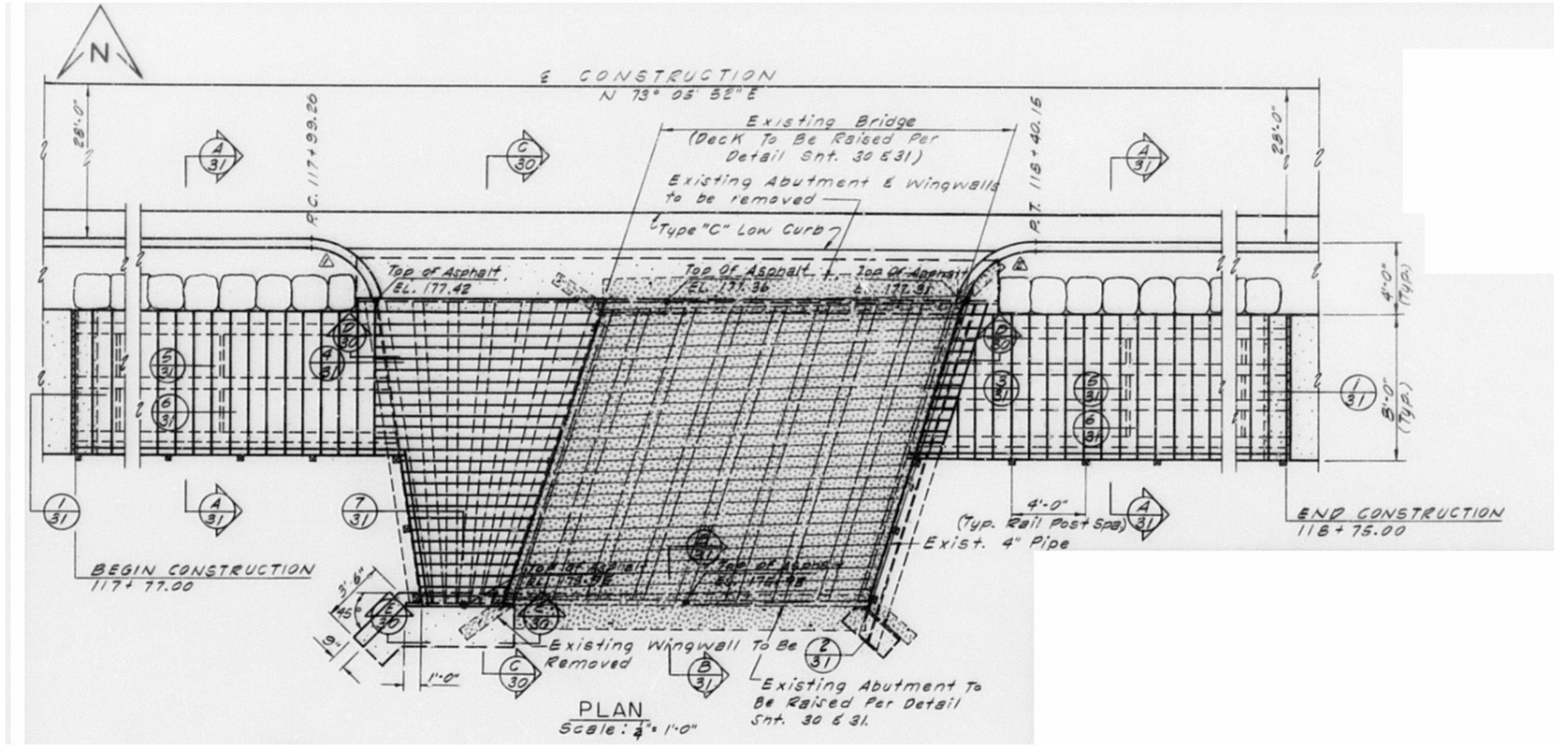
30% Progress Set

Existing Plan

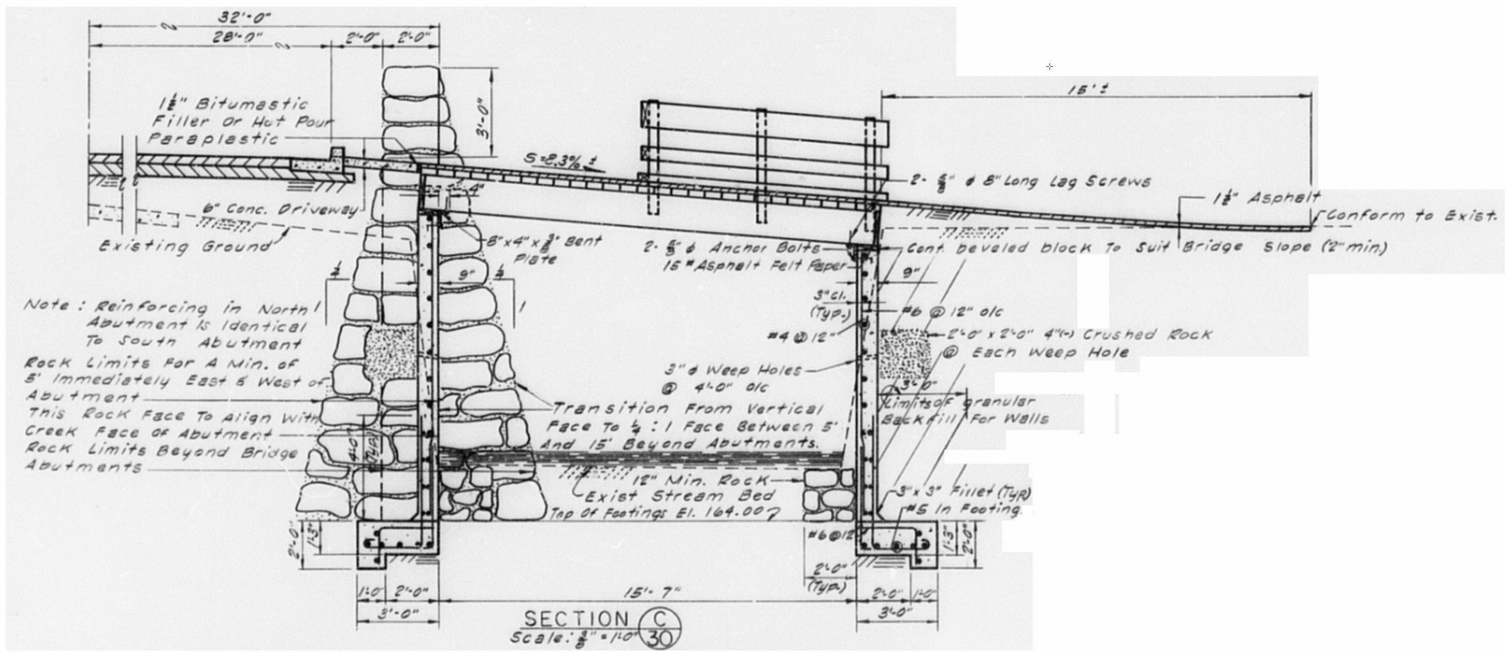
Early World School - West Bridge
13831 Bel-Red Road
Belleuve, WA

S2.0



SCALE: 1/4" = 1'-0"

1 West Brdige Plan



SCALE: 3/8" = 1'-0"

2 West Brdige Section

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SCALE: As indicated

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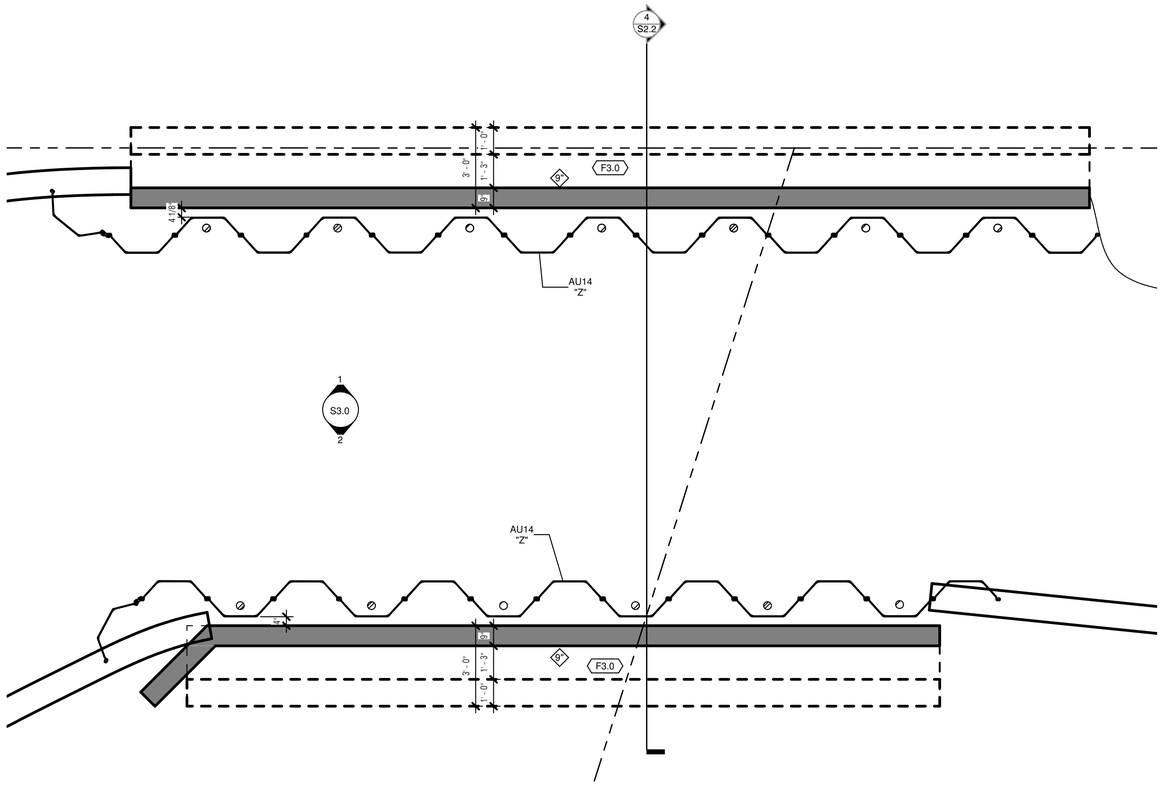
CD: CD
PERMIT: PD
OTHER: BD

Original Bridge Plans

Early World School - West Bridge
13831 Bel-Red Road
Belleuve, WA

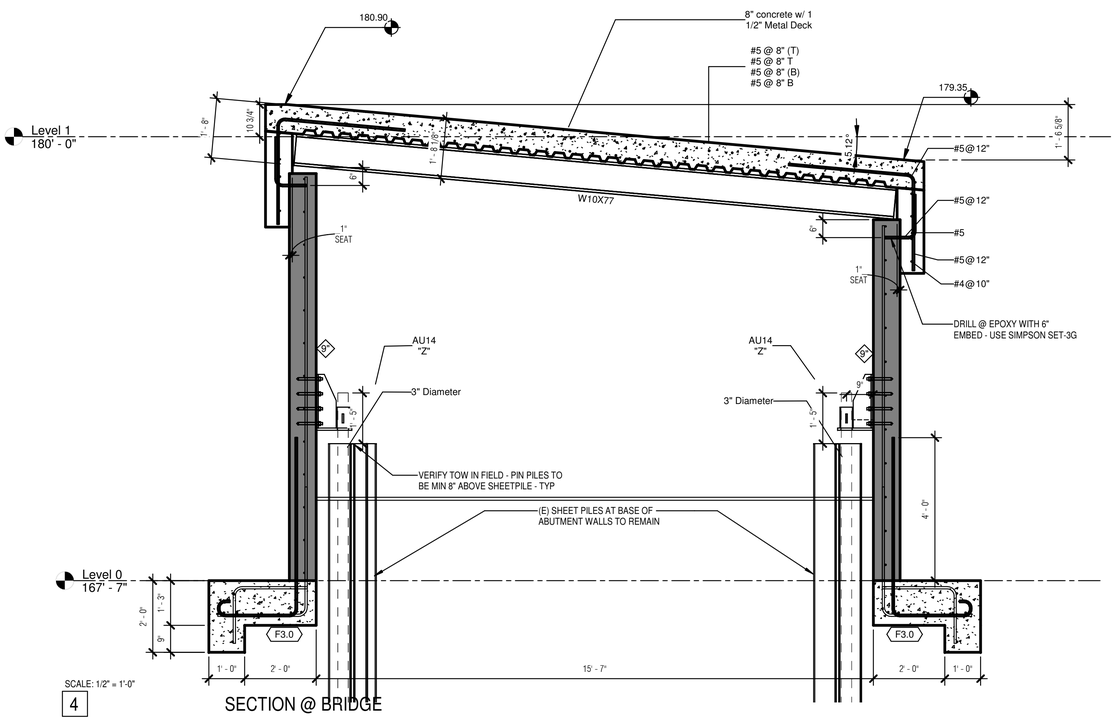
30% Progress Set

S2.1



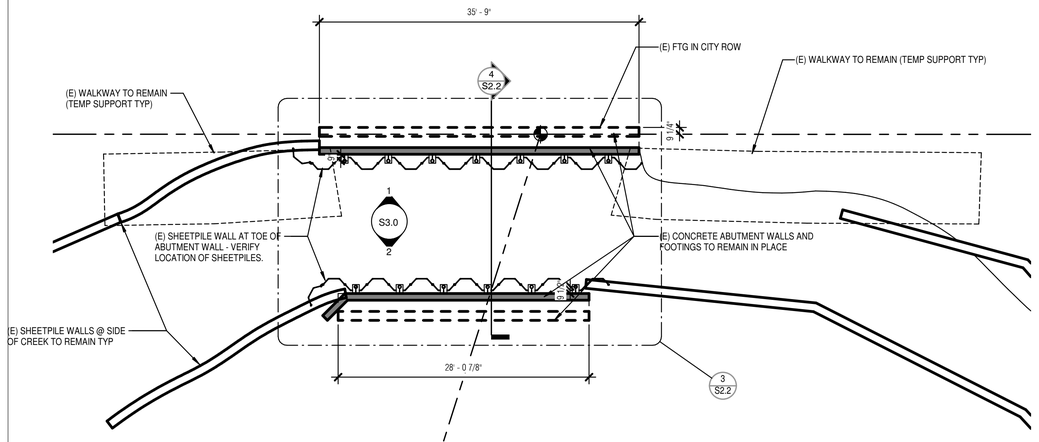
SCALE: 3/8" = 1'-0"

3 Partial Plan on (E) Sheet Piles



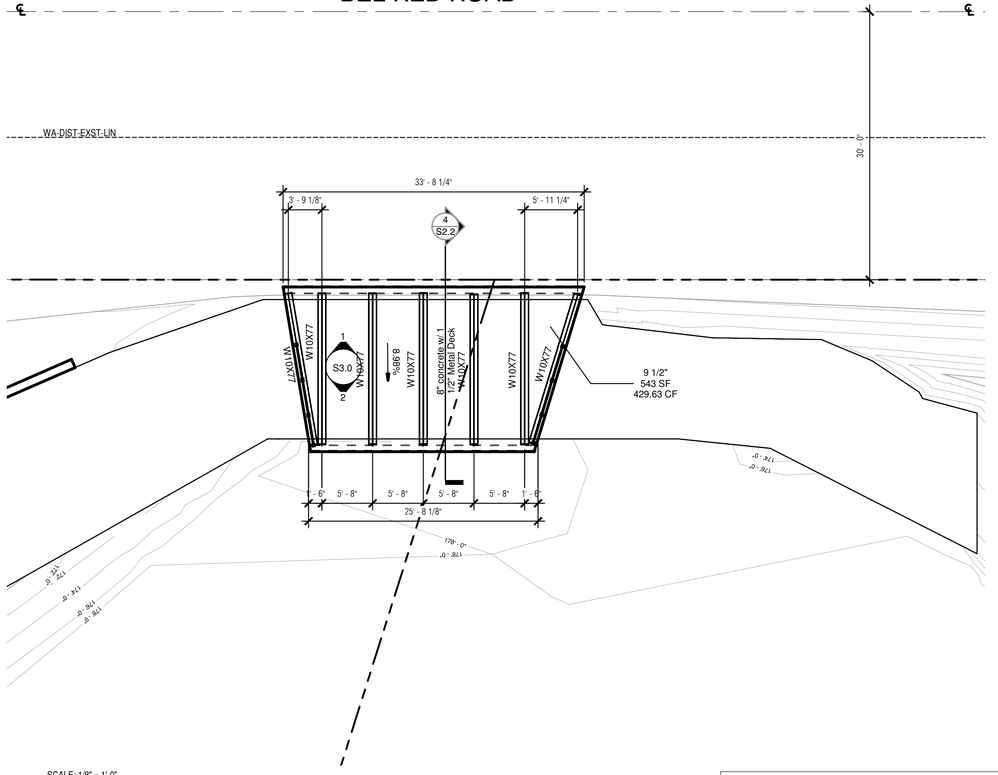
SCALE: 1/2" = 1'-0"

4 SECTION @ BRIDGE



SCALE: 1/8" = 1'-0"

1 Plan at Stream Bed



SCALE: 1/8" = 1'-0"

2 Plan on Deck

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12/17/21

No.	REVISION	DATE

JOB #: 21005
ENG: RTN
CAD: RTN
SCALE: As indicated

KEY ISSUE DATES:
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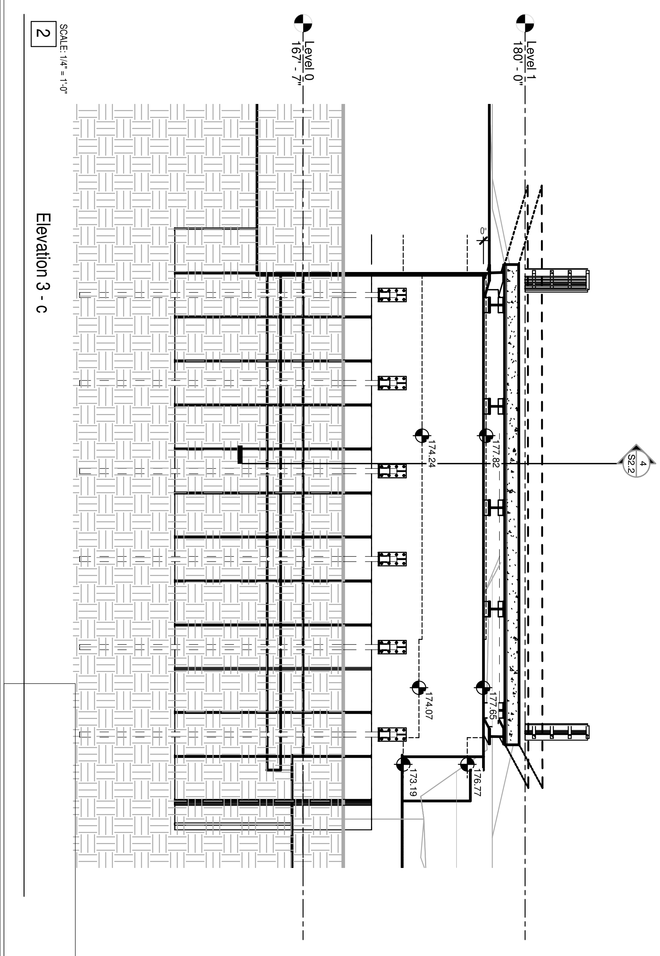
DD: DD
CD: CD
PERMIT: PD
OTHER: BD

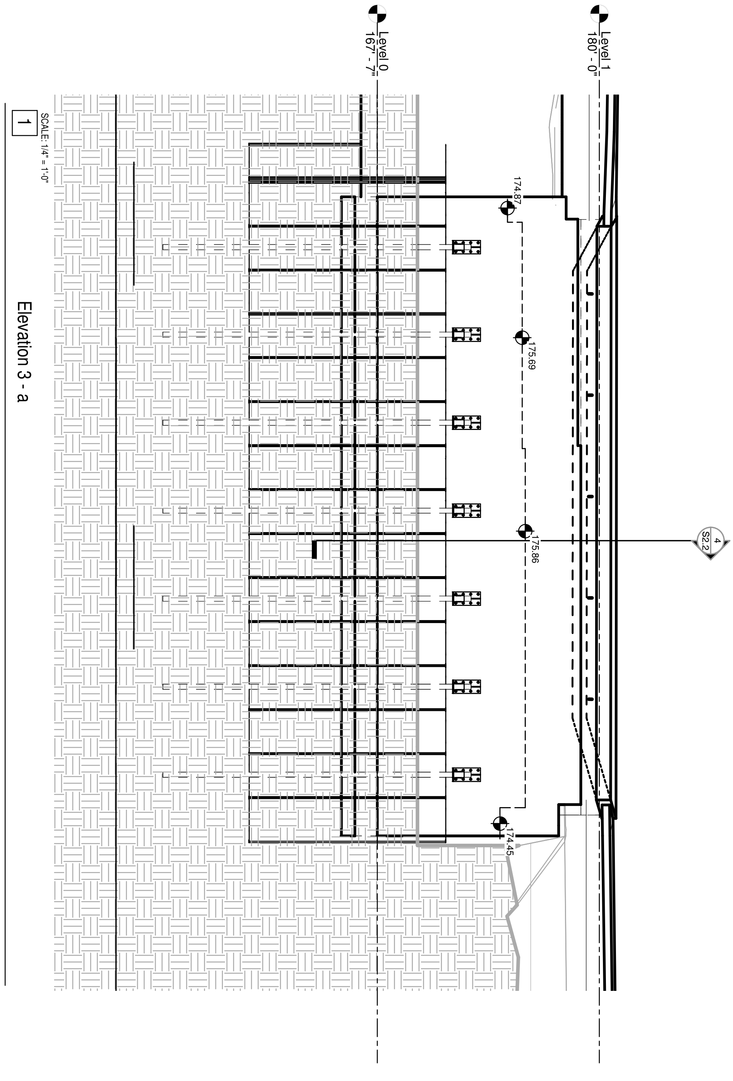
Abutment Plans

Early World School - West Bridge
13831 Bel-Red Road
Belleuve, WA

30% Progress Set

S2.2





S3.0

Elevations and Details

Early World School - West Bridge
13831 Bel-Red Road
Belleuve, WA

30% Progress Set

JOB #:	21005
ENG:	RTN
CAD:	RTN
SCALE:	1/4" = 1'-0"
KEY ISSUE DATES:	
SD:	12/17/21
DD:	DD
CD:	CD
PERMIT:	PD
OTHER:	BD

No.	REVISION	DATE

12/17/21

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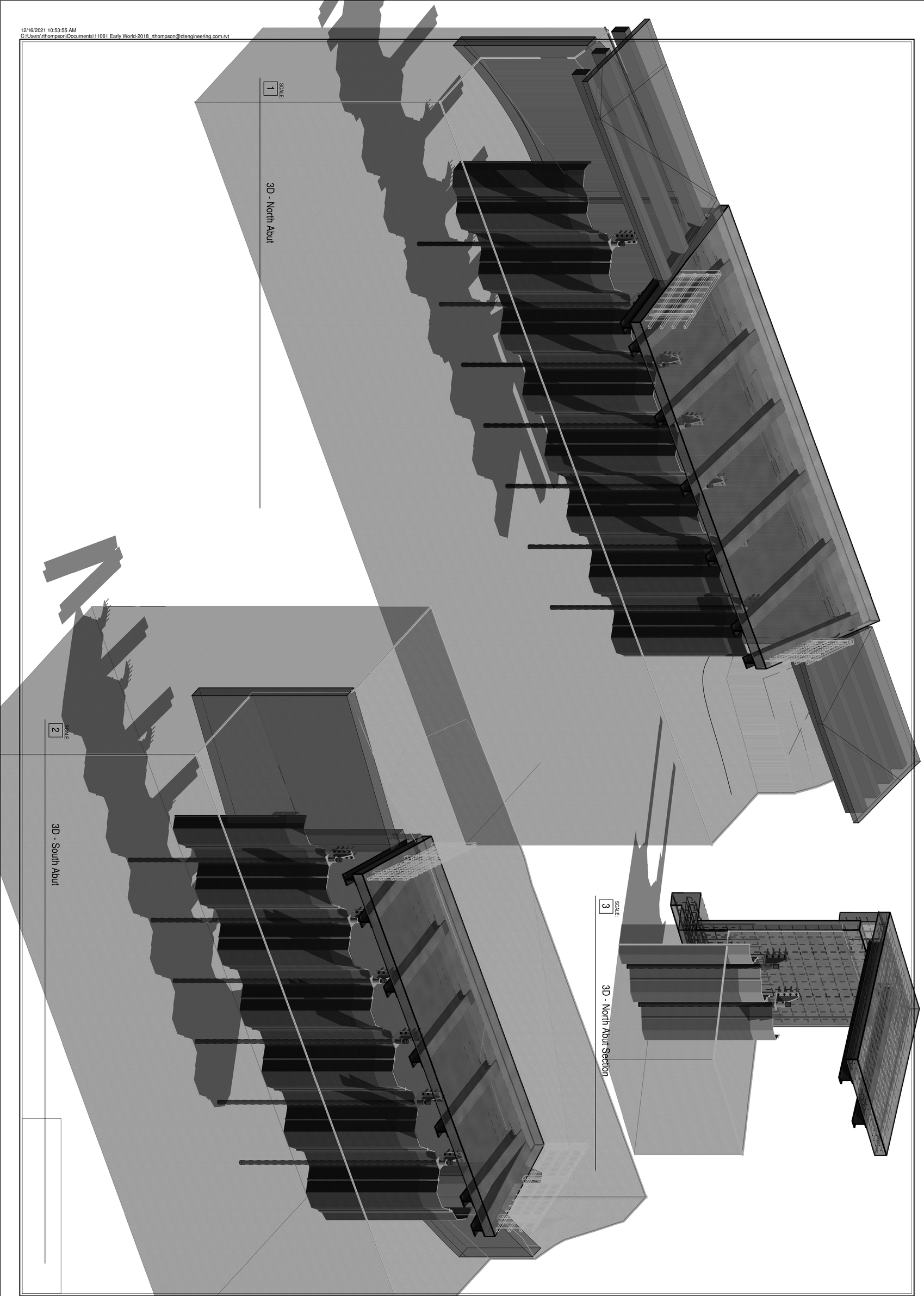

S4.0

3D Views of Abutments

Early World School - West Bridge
13831 Bel-Red Road
Belleuve, WA

30% Progress Set

JOB #:	21005
ENG:	Designer
CAD:	Author
SCALE:	

KEY ISSUE DATES:

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PERMIT:	PD
OTHER:	BD

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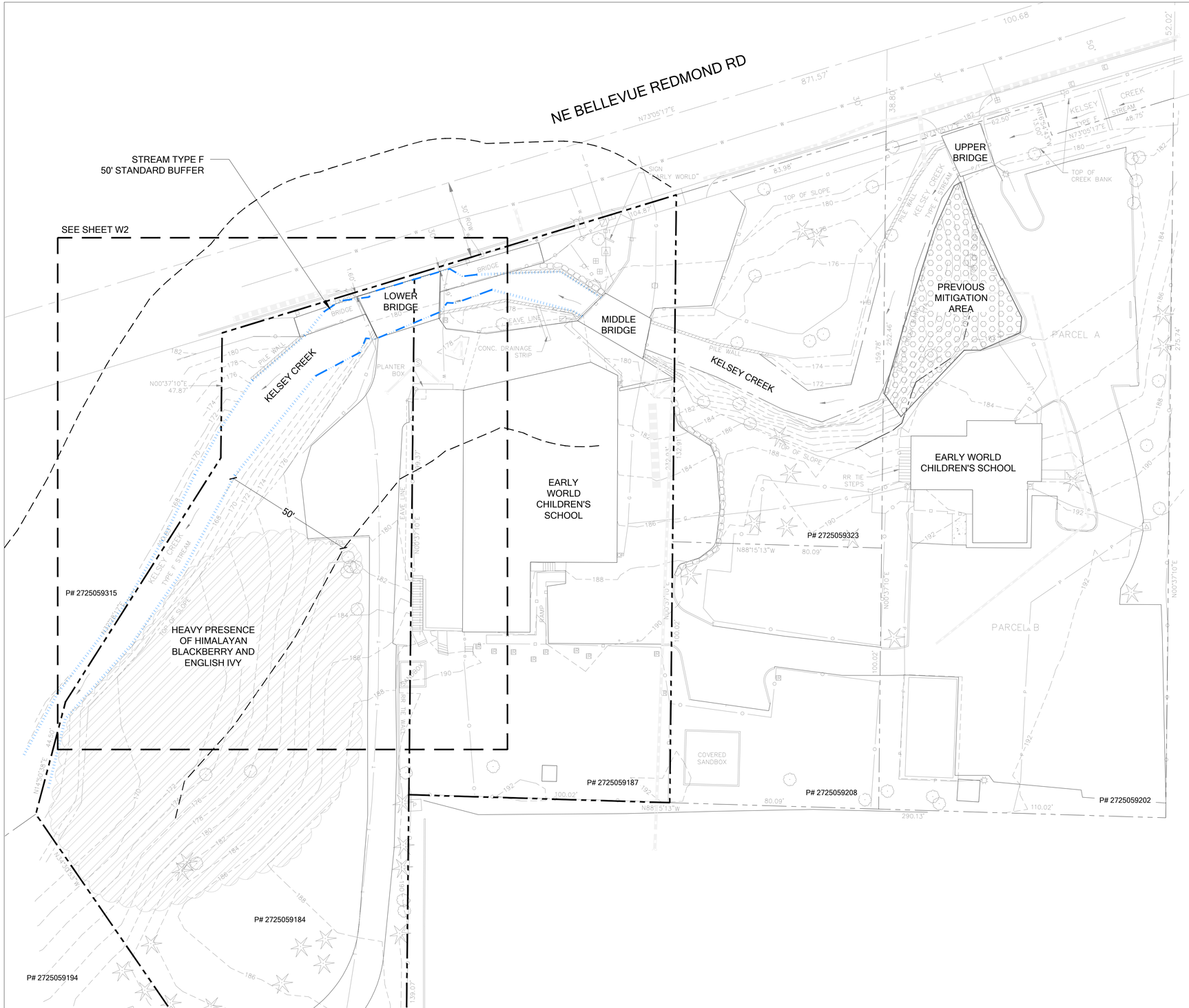
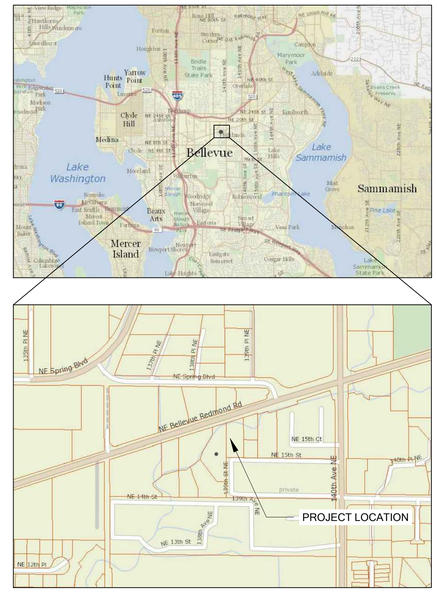


EXISTING CONDITIONS

SCALE 1:20



VICINITY MAPS

LEGEND

- PARCEL BOUNDARY
- DELINEATED STREAM OHWM
- APPROXIMATE STREAM OHWM
- STREAM BUFFER (50')

SHEET INDEX

NOTES

1. CRITICAL AREAS DELINEATED BY THE WATERSHED COMPANY ON JUNE 15, 2021.
2. GPS DATA DISPLAYED ON THIS MAP WAS COLLECTED IN THE FIELD USING AN TRIMBLE GPS. GPS DATA IS BELIEVED RELIABLE FOR GENERAL PLANNING AND MOST REGULATORY PURPOSES. HOWEVER, ACCURACY IS VARIABLE AND SHOULD NOT BE CONSIDERED EQUIVALENT TO A PROFESSIONAL LAND SURVEY. NO WARRANTY IS EXPRESSED OR IMPLIED.
3. SURVEY DATED 11/16/2011 CONDUCTED BY CONCEPT ENGINEERING INCORPORATED.

PERMIT SET - NOT FOR CONSTRUCTION

THE WATERSHED COMPANY
750 Sixth Street South
Kirkland WA 98033
p 425.822.5242
www.watershedco.com
Science & Design

EARLY WORLD CHILDREN'S SHCOOL

BRIDGE REPAIR

PARCEL # 2725059184 & 2725059185
13831 NE BELLEVUE REDMOND ROAD
BELLEVUE, WA

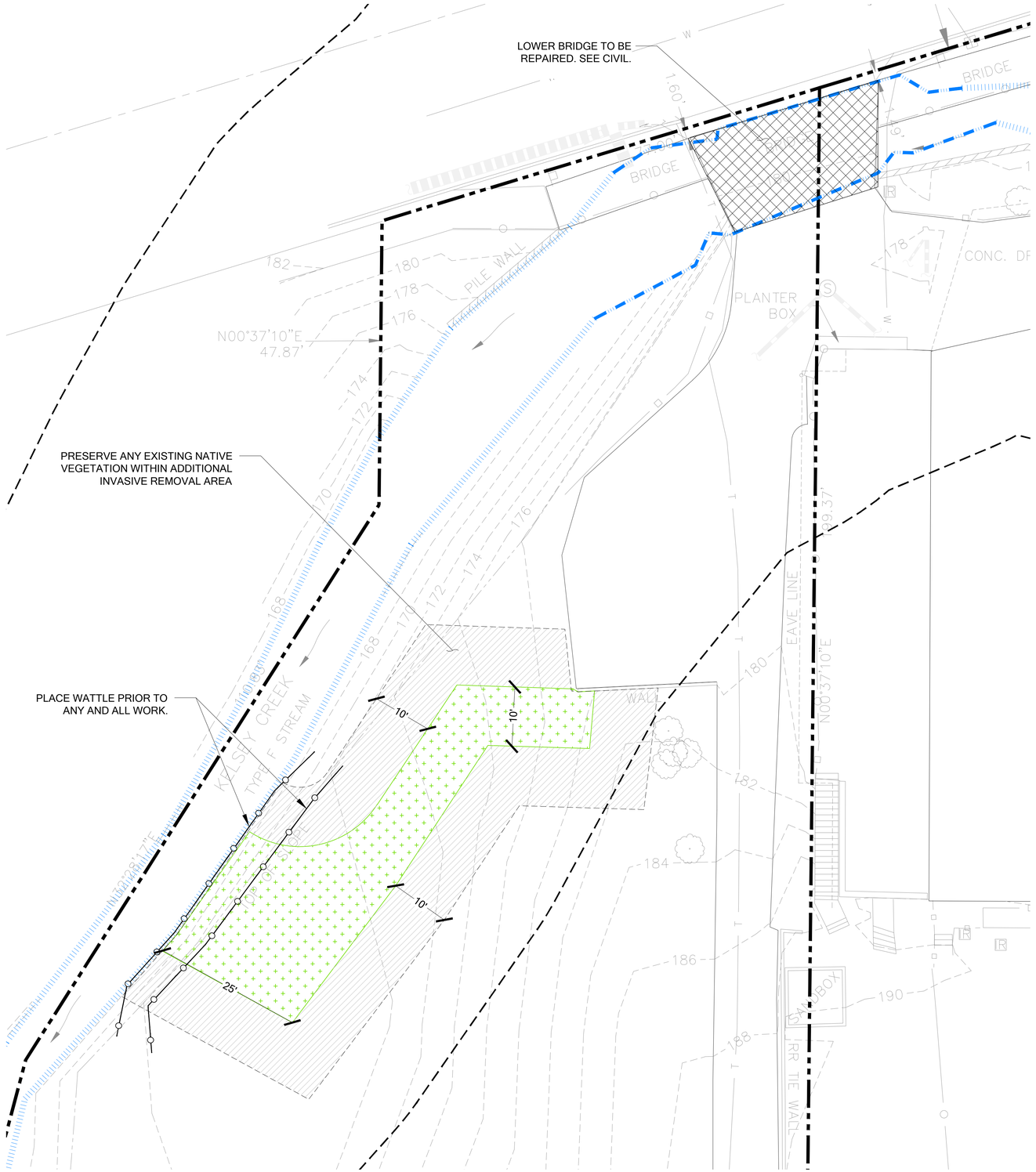
SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	12/015/2021	MITIGATON PLAN	AF

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER:
DESIGNED: AF
DRAFTED: AF
CHECKED: KB/MF
JOB NUMBER:
060926
SHEET NUMBER:
W1 OF 4

FILENAME
PRINTED BY
DATE



IMPACTS, MITIGATION, AND TESC PLAN

SCALE 1:10

LEGEND

EXISTING

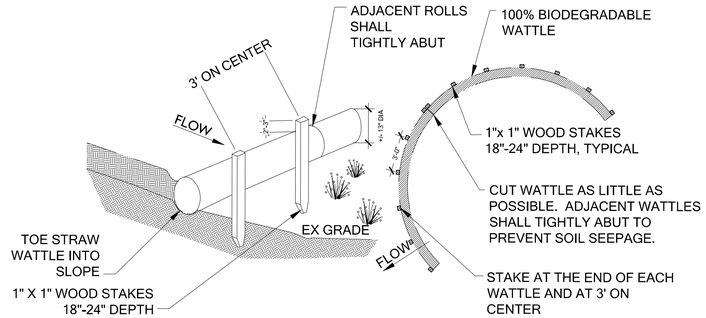
- PARCEL BOUNDARY
- DELINEATED STREAM OHWM
- APPROXIMATE STREAM OHWM
- STREAM BUFFER (50')

PROPOSED

- STREAM AND STREAM BUFFER IMPACTS (510 SF)
- STREAM BUFFER MITIGATION (1,200 SF)
- AREA OF ADDITIONAL INVASIVE ABOVE GROUND CLEARING (1,900 SF)
- 100% BIODEGRADABLE WATTLE (120 LF) (1 / W2)

NOTES

1. ALL TESC MEASURES SHALL BE PUT IN PLACE PRIOR TO ANY MITIGATION WORK.
2. WATTLE WILL ACT AS BOTH TEMPORARY AND LONG-TERM EROSION CONTROL. WATTLE SHALL REMAIN IN PLACE AFTER INSTALLATION AND WATTLE MUST BE 100% BIODEGRADABLE.
3. PRIOR TO PLANTING THE MITIGATION AREA, ALL INVASIVE SPECIES SHALL BE CLEARED AND GRUBBED FROM THE ENTIRETY OF THE MITIGATION AREA PRIOR TO SOIL DECOMPACTION. IN ADDITION, INVASIVES SHALL BE CLEARED (ABOVE GROUND) FROM THE ABUTTING VEGETATED AREA, TO A DEPTH OF 10 FEET BACK FROM THE EDGE OF PROPOSED RESTORATION AREAS. WITHIN ADDITIONAL INVASIVE CLEARING AREA, PROTECT AND PRESERVE ALL EXISTING NATIVE VEGETATION.
4. INVASIVE SPECIES SHALL BE DEFINED AS ALL SPECIES LISTED AS CLASS A, B, OR C OR AS A SPECIES OF CONCERN BY THE KING COUNTY NOXIOUS WEED CONTROL BOARD (KCNWCB).
5. INVASIVE SPECIES SHALL BE REMOVED AND DISPOSED OF ACCORDING TO KCNWCB RECOMMENDATIONS.
6. SEE PAGE W3 FOR PLANTING PLAN AND SOIL PREPARATION.



PLAN

NOTES

1. 100% BIODEGRADABLE WATTLE SHALL MEET THE MINIMUM SPECIFICATIONS AS FOLLOWS:
   a. WATTLE SHALL CONSIST OF 99.9% WEED FREE WHEAT, OAT, BARLEY, OR RICE STRAW. DIAMETER MAY VARY FROM +/- 13 INCHES.
   b. WATTLE NETTING IS MADE OUT OF NON-WOVEN PHOTODEGRADABLE HDPE (HIGH DENSITY POLYPROPYLENE) WITH A 1 YEAR UV INHIBITOR.
2. WATTLE SHALL BE INSTALLED PRIOR TO ALL OTHER WORK.
2. STAKING: WOODEN STAKES ARE RECOMMENDED TO SECURE THE WATTLE. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE WATTLE: 18" IS A GOOD LENGTH FOR HARD, ROCKY SOIL; FOR SOFT LOAMY SOIL USE A 24" STAKE.
3. WHEN INSTALLING RUNNING LENGTHS OF WATTLE, BUTT THE SECOND LOG TIGHTLY AGAINST THE FIRST; DO NOT OVERLAP THE ENDS.
4. STAKE THE WATTLES AT EACH END AND THREE (3) FEET ON CENTER. STAKES SHOULD BE DRIVEN OUTSIDE THE WATTLE, BUT CLOSE ENOUGH TO HOLD IT IN PLACE. LEAVE 2 - 3 INCHES OF THE STAKE PROTRUDING ABOVE THE WATTLE. A HEAVY SEDIMENT LOAD WILL TEND TO PICK UP THE WATTLE AND COULD PULL IT OFF THE STAKES IF THEY ARE DRIVEN DOWN TOO LOW.
1.
5. WHEN WATTLE ARE USED FOR FLAT GROUND APPLICATIONS, DRIVE THE STAKES STRAIGHT DOWN; WHEN INSTALLING WATTLE ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE. DRIVE THE FIRST END STAKE OF THE SECOND WATTLE AT AN ANGLE TOWARD THE FIRST WATTLE IN ORDER TO HELP ABUT THEM TIGHTLY TOGETHER.

1 100% BIODEGRADABLE

NTS

0' 5' 10' 20' 40'

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1	12/015/2021	MITIGATON PLAN	AF

SUBMITTALS & REVISIONS

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER:
DESIGNED: AF
DRAFTED: AF
CHECKED: KB/MF
JOB NUMBER: 060926
SHEET NUMBER: W2 OF 4

FILENAME
PRINTED BY
DATE

PLANT SCHEDULE

NATIVE TREES	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
	THUJA PLICATA / WESTERN RED CEDAR	5 GAL.	PER PLAN	3
	TSUGA HETEROPHYLLA / WESTERN HEMLOCK	5 GAL.		3

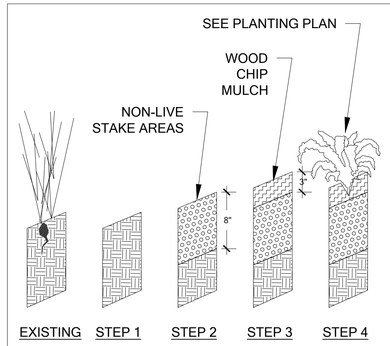
NATIVE SHRUBS	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
	ACER CIRCINATUM / VINE MAPLE	2 GAL..	PER PLAN	5
	CORYLUS CORNUTA / BEAKED HAZELNUT	2 GAL.		5
	MAHONIA AQUIFOLIUM / OREGON GRAPE	2 GAL.		12
	PHYSOCARPUS CAPITATUS / PACIFIC NINEBARK	2 GAL.		12
	ROSA PISOCARPA / CLUSTERED ROSE	2 GAL.		12
	SYMPHORICARPOS ALBUS / COMMON SNOWBERRY	2 GAL.		12
	VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY	2 GAL.		12

LIVE STAKE AREA		SIZE	SPACING	QTY
	CORNUS STOLONIFERA / RED TWIG DOGWOOD	LIVE STAKE	18" O.C.	25
	SALIX HOOKERIANA / HOOKER'S WILLOW	LIVE STAKE	18" O.C.	25

GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
	POLYSTICHUM MUNITUM / WESTERN SWORD FERN	1 GALLON	24" O.C.	45

NOTES

1. GROUP GROUNDCOVERS BY SPECIES AND PLANT IN GROUPS OF 5-7.
2. SEE SHEET W4 FOR PLANT INSTALLATION SPECIFICATIONS, DETAILS AND NOTES.
3. LIVE STAKE PLANTING AREA SHOULD NOT RECEIVE SOIL DECOMPACTION. SEE LIVE STAKE PLANTING DETAIL ON SHEET W4.



PLANTING AREA PREPARATION

STEP 1
REMOVE ANY INVASIVE SPECIES THAT HAVE SEEDED INTO THE DISTURBED SOIL AREAS. APPLY HERBICIDE SPOT TREATMENT WHERE APPROPRIATE.

STEP 2
DECOMPACT SOIL EIGHT (8) INCHES IN NON-LIVE STAKE AREAS.

STEP 3
PLACE THREE (3) INCH LAYER OF WOOD CHIP MULCH.

STEP 4
INSTALL PLANTS BEING CAREFUL TO PULL MULCH AWAY FROM STEMS.

1 SOIL PREPARATION (PLANTING AREA ONLY)

NTS

PLANTING PLAN AND SCHEDULE

SCALE 1:8

0' 4' 8' 16' 32'

PERMIT SET - NOT FOR CONSTRUCTION

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060926
SHEET NUMBER:
W3 OF 4

FILENAME
PRINTED BY
DATE

PLANT INSTALLATION SPECIFICATIONS

GENERAL NOTES

QUALITY ASSURANCE
1. PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
2. PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
3. TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
4. NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 2018 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

DEFINITIONS
1. PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC.; SPRIGS, PLUGS, AND LINERS.
2. CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
2. SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
3. IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
4. SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION
1. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
2. PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
3. THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENT OF PLANTS
1. PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
2. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
3. WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.).

SUBMITTALS

PROPOSED PLANT SOURCES
1. WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES
1. PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
2. HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION
CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS
1. TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
2. SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
3. HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
4. LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY
PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

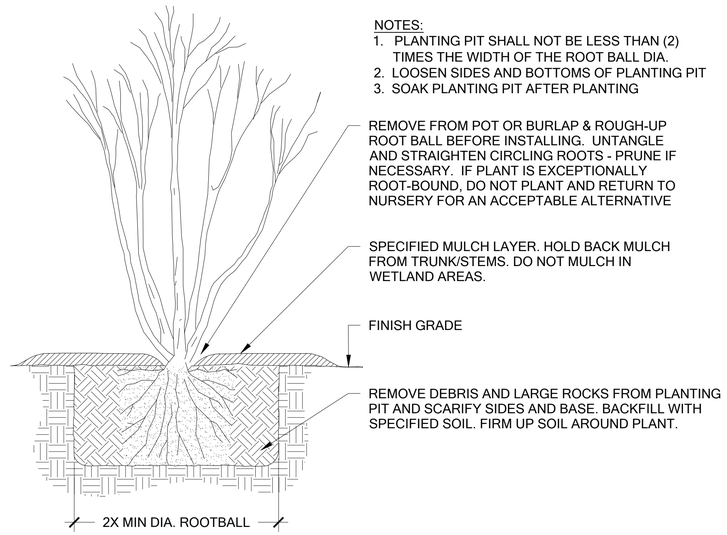
REPLACEMENT
1. PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE CONSULTANT'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
2. PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLANT MATERIAL

GENERAL
1. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

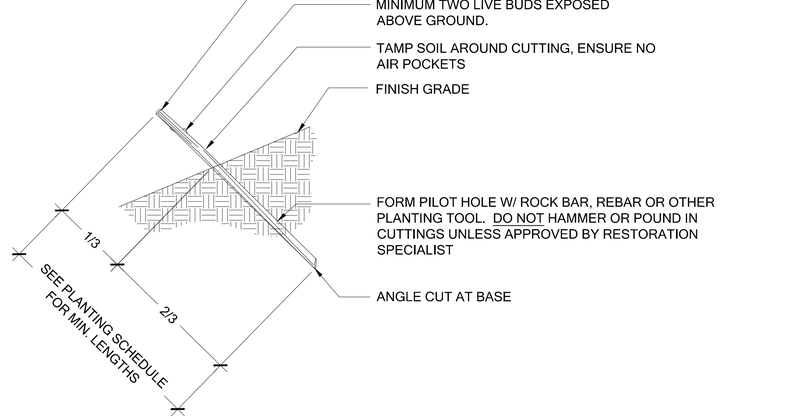
QUANTITIES
SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

ROOT TREATMENT
1. CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
2. PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
3. ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.



1 CONTAINER PLANTING DETAIL

Scale: NTS



2 LIVE STAKE DETAIL

Scale: NTS

PLANT INSTALLATION SPECIFICATIONS, DETAILS AND NOTES

SCALE AS NOTED

PERMIT SET - NOT FOR CONSTRUCTION

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BELLEVUE, WA

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	12/015/2021	MITIGATON PLAN	AF

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER:
DESIGNED: AF
DRAFTED: AF
CHECKED: KB/MF
JOB NUMBER:
060926
SHEET NUMBER:
W4 OF 4

FILENAME
PRINTED BY
DATE